



St David's College

— Est. 1965 —

Sixth Form Options

2020-2021

Subject Choices

The following pages give a brief overview of the courses on offer at St David's College and include details on how the subject will be assessed for pupils beginning the course in 2020. More information is also available directly from the individual departments listed below.

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* New for 2020

Applied Science

Exam Body

Pearson (BTEC Level 3)

Head of Department

Andrew Goodwin

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This course is ideal for anyone who is interested in science and would like a qualification equivalent to an Advanced Level but doesn't want to specialise in the individual Science Advanced Levels.

Units within the qualification cover areas of laboratory science, forensic science, medical science, environmental science and biological, chemical and physical science to provide a route to employment in the science industry or within organisations that use science.

As with other BTEC courses, the work will be assessed in a variety of different formats, including external examinations. Practical work can also be assessed via teacher observation.

Units offered

- Practical and Applications of Science
- Practical Scientific Procedures and Techniques
- Science Investigation Skills
- Laboratory Techniques and their Application

Art & Design

Exam Body

WJEC

Head of Department

Simon Scarff

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All Advanced courses within the Art department offer a rich and diverse range of learning experiences. Pupils are encouraged to express themselves freely.

Projects are devised to imagination and promote experimentation through inventive use of materials and techniques.

Skills are taught that allow all pupils to explore a range of practical and theoretical approaches from which they can develop personal work.

Individual special abilities and interests are discovered, encouraged and developed.

Our aim is to inspire confidence, enthusiasm and a sense of achievement at each stage of the course studied.

Course content

AS Unit 1 - Personal Creative Enquiry

Non-exam Assessment: 40% of qualification

A2 Unit 2 - Personal Investigation

Non-exam Assessment: 36% of qualification

A2 Unit 3 - Externally Set Assignment

Non-exam Assessment: 24% of qualification



Biology

Exam Body

Eduqas

Head of Department

Stephanie Stephenson

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What's inside a cell?

How do enzymes work?

Crack the genetic code and find out about plumbing in plants and animals.

Love living things?

To take the Advanced Level in Biology pupils should have a good pass mark at GCSE in Science. There is also a significant amount of practical work in this subject.

This specification is a linear course divided into a total of 3 units.

Course Content

AS Unit 1 - Basic Biochemistry and Cell Organisation

Written examination: 1 hour 30 minutes (80 marks)

A range of short and longer structured questions and one extended response.

AS Unit 2 - Biodiversity and Physiology of Body Systems

Written examination: 1 hour 30 minutes (80 marks)

A range of short and longer structured questions and one extended response.

A Level (the above plus a further 3 units)

Component 1 – Energy and the Environment

Written examination: 2 hours (100 marks)

A range of short and longer structured questions and one extended response.

Component 2 - Variation, Inheritance and Options

Written examination: 2 hours (100 marks)

Computer Aided Draughting & Design

Exam Body

SQA (Level 7 - HNC)

Head of Department

Martin O'Leary

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The Advanced Certificate in Computer Aided Draughting and Design will develop a comprehensive level of knowledge and practical skills in traditional CADD topics, as well as the more advanced features of modern software.

Pupils will also develop knowledge and understanding of the design process, and of how CADD can help in achieving a desirable design solution.

This SQA Level 7 course allows students to specialise in disciplines such as Visualisation and Animation, Feature Based Modelling, Product and Industrial Design, Graphical Design, CAD Systems Management, Prototyping, Manufacturing, and Materials. Students will also develop analysis and synthesis skills.

Employment and Progression Opportunities - Having achieved the Level 7 / HNC, students could go on to employment as a CADD Technician/ Operator or Junior Designer in a variety of industries including: Architecture and Construction; Engineering (Mechanical, Electrical, Fabrication, and Manufacturing); Furniture and Interior Design and Product Design.

Course Content

Within this qualification pupils cover a range of topics including:

- 3D Surface and Solid Modelling
- CAD User Systems
- CAD Principles
- Design Methodology



Chemistry

Exam Body

WJEC

Head of Department

Andrew Goodwin

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To take Advanced Level Chemistry pupils should have a good pass mark at GCSE in Science and Mathematics. There is a significant amount of practical work in this subject. Pupils will sit the AS exam at the end of Year 12 and can exit the course at this point or can continue to A2 provided they have achieved a pass in Units 1 & 2.

Course Content AS

AS (2 units)

AS Unit 1 - The Language of Chemistry, Structure of Matter and Simple Reactions

Written examination: 1 hour 30 minutes (80 marks)

A range of short answer, structured and extended response questions.

AS Unit 2 - Energy, Rate and Chemistry of Carbon Compounds

Written examination: 1 hour 30 minutes (80 marks)

A range of short answer, structured and extended response questions.

Course Content A Level

A Level, AS plus a further 3 units

A2 Unit 3 - Physical and Inorganic Chemistry

Written examination: 1 hour 45 minutes (80 marks)

A range of short answer, structured and extended response questions.

A2 Unit 4 - Organic Chemistry and Analysis

Written examination: 1 hour 45 minutes (80 marks)

A range of short answer, structured and extended response questions.

A2 Unit 5 - Practical (60 marks)

This unit comprises two tasks:

Experimental Task (30 marks)

Practical Methods and Analysis Task (30 marks)

Design and Technology

Exam Body

WJEC

Head of Department

Martin O'Leary

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We believe that Design Technology is much more than the national curriculum which tends to define what can be assessed. Our view of the subject seeks to embrace the national curriculum and extend it into a full educational experience.

The core experience is essentially about providing opportunities for pupils to develop their capability, through combining their designing and making skills with knowledge and understanding in order to create quality products. The DT department at St David's places emphasis on quality products as there is great benefit to pupils experiencing success and handling products that are well made. In addition, we see the preparation of young people for citizenship in a technological society as a central activity within the subject.

The subject is delivered in a state-of-the-art building which comprises:

- Three fully equipped multimedia workshops.
- A dedicated design and graphic studio housing the latest PC-based graphics and design software, in addition to ample layout space.
- A dedicated computer aided design suite utilising the very latest in industrial CAD/CAM software including Autodesk solutions, Solidworks, Ashlar Vellum and Pro | Engineer Wildfire.
- Access to top end animation software including 3DS Max, Form Z, Lightwave, Maya and Smoke.

Course Content A Level

AS Unit 1: Written Paper

Written examination: 2 hours

AS unit 2: Design and make task

Non-exam assessment: Approx 40 hours

A2 unit 3: Written paper 2

Written examination: 2 hours 30 minutes

A2 unit 4: Design and make project

Non-exam assessment: Approx 60 hours



Duke of Edinburgh Award

Head of Department

Ian Martin
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St David's College uses the Duke of Edinburgh's Award scheme to provide an enjoyable, challenging and rewarding programme of high-quality personal development.

The scheme encourages pupils to undertake exciting, constructive, adventurous and enjoyable activities in their free time.

The Award gives them a voice; supports them in developing personal and social relationships; enables them to learn for life; lead healthy lifestyles and helps to manage risk.

There are many benefits that St David's pupils who complete a Bronze, Silver or Gold Duke of Edinburgh's Award. Some of these are listed below:

- Self-belief.
- Self-confidence.
- A sense of identity.
- Independence of thought and action.
- A sense of responsibility.
- An awareness of your potential.
- Understanding strengths and weaknesses.
- Public recognition for achievements.
- The ability to plan and use time effectively.
- The ability to learn from and give back to others in the community.
- New relationships.
- Skills including problem-solving, presentation and communication.
- The ability to lead and work as part of a team.
- Sense of satisfaction in meeting and succeeding a series of different challenges.

DofE Sections

There are 4 sections that have to be complete to obtain the awards:

- Volunteering
- Physical
- Skills
- Expedition

English Language and Literature

Exam Body

AQA
Head of Department
Jennifer Turner
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This qualification offers opportunities for pupils to develop their subject expertise by engaging creatively and critically with a wide range of texts. Using literary and linguistic concepts and methods, pupils analyse literary and non-literary texts in a range of modes and genres, in the process gaining insights into the nature of different discourses and ideas about creativity. Pupils develop skills as producers and interpreters of language by creating texts themselves and critically reflecting on their own processes of production.

The topics and titles of the subject content clearly signpost the key areas of study and separate the content both logically and distinctively. 'Views and Voices' focuses on how and why views and perspectives of different kinds are shaped and used in narratives, and how language choices help to shape the representations of different worlds and perspectives. 'People and Places' retains this focus on language choices (which pervades the specification) but looks at how these choices help to shape the representations of a place, along with different perspectives.

Literary texts are defined as those that are drawn from the three main literary genres of prose fiction, poetry and drama. 'Non-literary' is an overarching term which describes more than simply non-fiction.

Course Content

AS Paper 1: Views and Voices
Written examination: 1.5 hours

AS Paper 2: People and Places
Written examination: 1.5 hours

A2 Paper 1: Telling Stories

Written examination: 3 hours

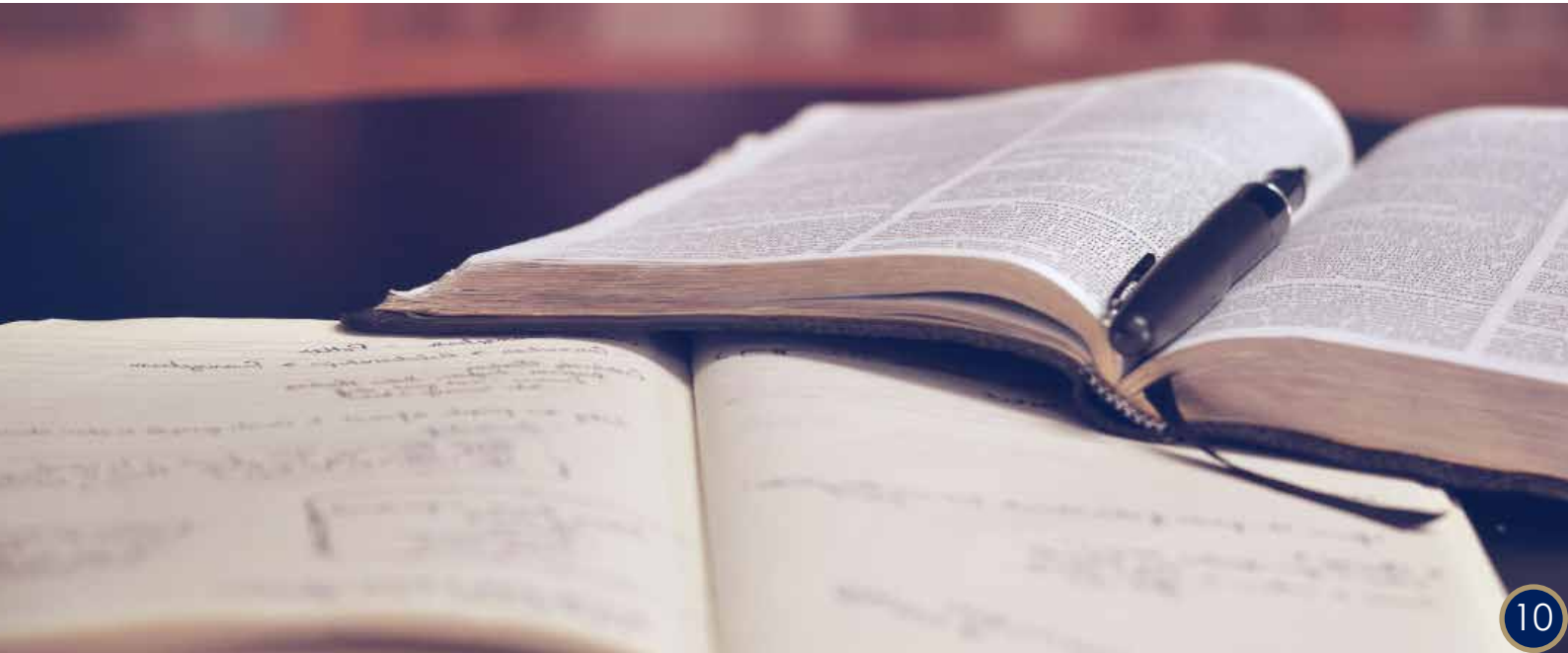
A2 Paper 2: Exploring Conflict

Written examination: 2.5 hours

A2 Coursework: Making Connections

Personal investigation: 2500-3000 words

It includes non-fiction but also texts and data that are not formally published and marketed – for example, personal letters, spontaneous speech, multimedia texts. Non-literary texts do not have to occur in continuous prose: they can be charts and diagrams, transcripts, lists.



Enterprise & Entrepreneurship

Exam Body

Pearson (BTEC Level 3)

Head of Department

Mark Turner

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The assessment approach of the qualifications allows learners to receive feedback on their progress throughout the course as they provide evidence towards the assessment and grading criteria. Some units are also assessed through external examinations.

Business employers value employees who can communicate effectively both verbally and using electronic communication methods.

The qualification provides opportunities for learners to develop their communication skills as they progress through the course.

This can be through presentations and discussions in which pupils have the opportunity to express their opinions. Pupils are encouraged to take responsibility for their own learning and achievement, taking into account industry standards for behaviour and performance.

Course Content

Within this qualification, pupils cover a range of topics including:

- Enterprise and Entrepreneurs
- Developing a Marketing Campaign
- Personal and Business Finance
- Social Enterprise
- Enterprise and Entrepreneurship in Practice

Geography

Exam Body

WJEC

Head of Faculty

Matthew Roberts

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The course allows pupils to strengthen knowledge, skills and develop research methods to leave school life as a highly adaptable, employable and desirable individual. The courses add detail to that learnt during, GCSE whilst also introducing a vast array of new topics.

During the two years there will be ample opportunities for field visits, including an opportunity to take part and represent a country of their choice in a model United Nations conference.

The Department prides itself on being well resourced with textbooks and field equipment as well as digitally and online. Department members are specialist and enthusiastic and integrate their own experiences of global travel and Geography into lesson content. This caters for a wide-ranging form of teaching and learning styles, meeting the needs of every pupil.

Course Content AS

AS Unit 1: Changing Landscape

Written Exam 2 hours

Section A: Changing landscapes

Section B: Tectonic Hazards

AS unit 2: changing Places

Written Exam 1 hour 30 minutes

Section A: Changing Places

Section B: Fieldwork investigation in physical and human geography

Course Content A Level

A2 Unit 3: Global Systems and Global Governance

Written Exam 2 hours

Section A: Global Systems

Section B: Global Governance: Change and Challenges

Section C: 21st Century Challenges

A2 Unit 4: Contemporary Themed in Geography

Written Exam 2 hours

Section A: Tectonic Hazards

Section B: Contemporary Themes in Geography

A2 Unit 5: Independent investigation

Non-exam assessment: 3000 - 4000 words



History

Exam Body

AQA

Head of Faculty

Matthew Roberts

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History isn't a subject that is stuck in the past. Far from it! Historical events have shaped who we are today, and this is true across the world. Did you know that Magna Carta, a document signed in 1215, is the basis of the US constitution?

The A level History course is designed to help pupils understand the value and significance of world events in the past. In the process, they will gain deeper understanding of social, cultural, religious and ethnic diversity. Knowing how people lived in the past helps us to understand why people act like they do today.

Skills that history pupils develop:

- The ability to analyse.
- The ability to make informed criticisms.
- Independent research skills.
- Organisation.
- The ability to listen and work with others.
- To develop your own opinion.

This is a two-year A level course with all examinations being taken in year 13.

Course Content

- Unit 1: Breadth Study - The Tudors 1485-1603 - 2hours 30min written examination (40%).
- Unit 2: Depth Study - The Birth of the USA 1760-1801 – 2hours 30min (40%).
- Unit 3: Topic based essay. This is a 3000-4000 word essay on an historical topic of the pupil's choice. This unit is pupil led research and the topic they will study will be discussed with the teachers (20%).

Mathematics

Exam Body

AQA

Head of Department

Jilian Dolder

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The course for A2 Mathematics naturally follows on from GCSE. This is a course worth studying in its own right or as a supporting subject for the physical and social sciences. It requires a high degree of commitment in students from the start of Year 12 and is of value to those thinking of higher education based on the sciences.

Whilst studying mathematics you will be expected to:

- Use mathematical skills and understanding to solve problems, including problems that are faced in real life contexts.
- Solve complex problems by using mathematical arguments and logic.
- Simplify real life situations and use mathematics to show what is happening and what could happen in different circumstances.
- Use calculator and other technology. The course follows the AQA syllabus for A2 mathematics. The course is split into 3 modules, each worth 1/3 of the A Level. Each module is assessed with a 2-hour exam. There is no coursework.

Course Content

Core Maths

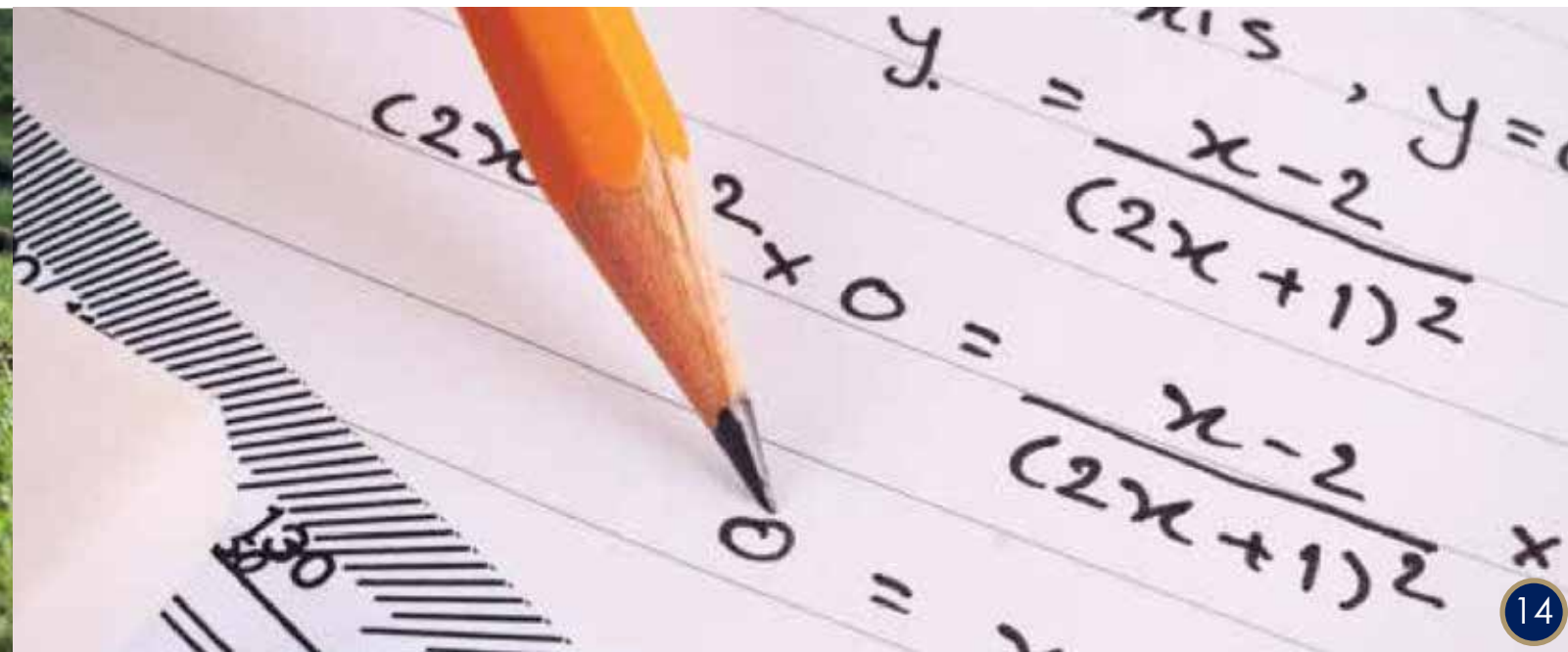
When studying core Mathematics, you will be extending your knowledge of topics studied at GCSE and learn about new ideas such as calculus and the equations of circles. Ideas in the core modules are the foundation for mathematical exploration. It is in the core modules that you learn the techniques to solve problems in other areas such as mechanics.

Mechanics

Mechanics is the study of the motion of objects and how they respond to forces acting upon them. You will learn the technique of mathematical modelling to simplify real life situation to help analyse problems. Many of the ideas met here are an introduction to areas such as Physics and Engineering.

Decision Maths

In this you will learn how to apply methods to solve practical problems such as finding the shortest path from one place to another or making decisions that will help a company maximise its profits or reduce costs.



Motor Vehicle Studies

Exam Body

ABC (Level 1)

Lead Teacher

Phil Mulvihill

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This qualification takes place in or purpose-built facility. The sessions normally run on Fridays and Saturdays. The course offers a flexible bank of units that provides an overview of potential occupations and job roles within the sector.

It provides pupils with specialist and transferable skills, engages them with current industry practice, and prepares them to progress onto further qualifications or employment within the motor vehicle industry.

Course Content

Mandatory Unit:

- Health and safety for motor vehicle studies.

Optional Units:

- Introduction to vehicle ignition systems.
- Introduction to vehicle valeting.
- Introduction to motorcycle maintenance.

Production Arts

Exam Body

Pearson (BTEC Level 3, 1.5 A Levels)

Lead Teacher

Nick Cogger

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Production Arts is a popular subject in Sixth Form where our pupils have access to teaching and learning approaches that challenge them to deepen and refine their skills over time.

This approach is supported by the mandatory content for all learners, which addresses areas including stage lighting, sound, video projection, stage management and set construction. The qualification also looks at:

- the development of production arts skills
- the management of projects
- self-analysis and reflection
- an appreciation of the production arts industry and their future role in it
- the ability to present themselves and their achievements effectively.

The specification is divided into a number of large learning and teaching modules. This allows content themes to be taught together and revisited, to ensure that pupils are integrating their learning and developing their skills holistically and iteratively. The content for each learning and teaching module is related to a number of assessment units, which may draw broadly on the content themes in the defined evidence. For internal assessment units, these learning and teaching modules allow pupils to use large-scale projects easily, as the basis for generating evidence for assessment.

Course Content

Pupils taking this qualification will study our mandatory units:

- Unit A1: Developing Production Skill and Techniques
- Unit A2: Responding to production requirements and purpose
- Unit A3: Contributing to a production
- Unit F16: Planning a Career in the Industry



Physics

Exam Body

WJEC

Head of Department

Andrew Goodwin

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How does it work?

Why does it do that?

Where has that come from?

What do you mean, light is not a wave?

To take Advanced Level Physics, pupils should have a good pass mark at GCSE in Science and Mathematics.

Course Structure AS/A2 A Level

The concept-led approach to AS and A level Physics begins with a study of the laws, theories and models of physics, and finishes with an exploration of their practical applications.

Course Content

AS Unit 1: Motion, Energy and Matter

Written examination: 1 hour 30 minutes (80 marks) 20% of qualification

AS Unit 2: Electricity and Light

Written examination: 1 hour 30 minutes (80 marks) 20% of qualification

A2 Unit 3: Oscillations and Nuclei

Written examination: 2 hours 15 minutes (100 marks) 25% of qualification

A2 Unit 4: Fields and Options

Written examination: 2 hours (100 marks) 25% of qualification

A2 Unit 5: Practical Exam

10% of qualification

Sport

Exam Body

Pearson (BTEC Level 3)

Head of Department

Dan Lycett

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The Level 3 National Extended Certificate in Sport qualification is designed to support progression to higher education when taken as part of a programme of study that includes other appropriate BTEC Nationals or A Levels.

It provides a broad basis of study for the sport sector.

Assessment is specifically designed to fit the purpose and objective of the qualification. It includes a range of assessment types and styles suited to vocational qualifications in the sector.

There are three main forms of assessment that you need to be aware of: external, internal and synoptic.

Additionally, from this year pupils will be able to select this qualification in two option blocks if they wish to complete the National Diploma in Sport, which is equivalent to two A-Levels. There will be further mandatory units in Sports Leadership, Investigating Business in Sport in the Active Leisure Industry and Skill Acquisition in Sport, in addition to a range of optional units to choose from.

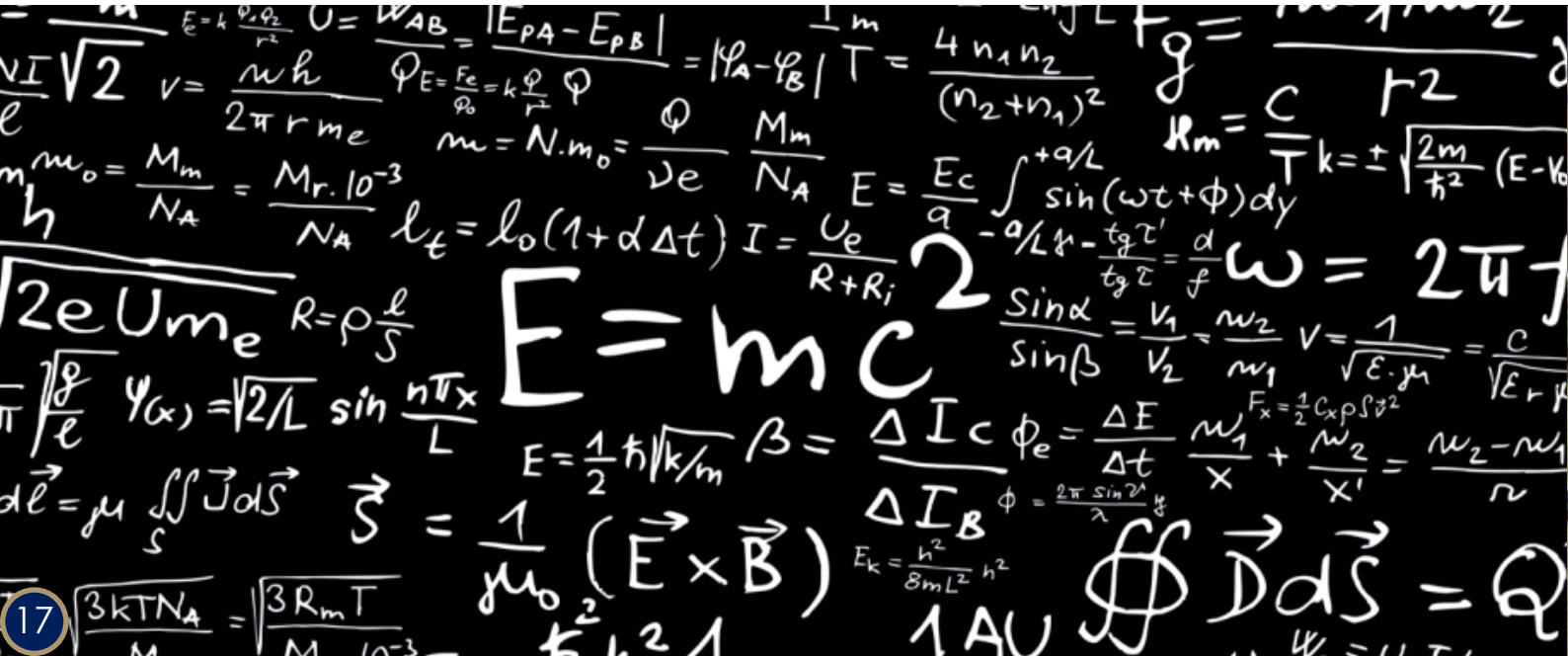
Course Content

Mandatory Units

- Anatomy and Physiology
- Fitness Training and Programming for Health, Sport and Well-being
- Professional Development in the Sports Industry

Optional Units

- Sports Leadership
- Application of Fitness Testing
- Sports Psychology
- Practical Sports Performance



Sport and Outdoor Activities

Exam Body
Pearson (BTEC Level 3 1.5 A Levels)

Head of Department
Ian Martin
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This is intended for post-16 learners who want to progress directly to employment in the outdoor activities sector as an assistant outdoor instructor. When studied alongside other Level 3 qualifications as part of the study programme the qualification supports progression to a range of higher-education courses.

From these units, pupils will gain the underpinning knowledge, skills and behaviours needed to work in the Sport and Outdoor Activities sector. Pupils will focus on exploring factors affecting the outdoor sector and how to maintain health and safety, including in respect of the equipment and facilities required for participation in outdoor activities. Pupils will develop and reflect on their personal skills and environmental responsibilities when delivering various outdoor activities.

In addition, pupils can choose one optional unit, linked to their area of interest, that will enhance the breadth of learning and support their employment opportunities. Options include units such as expedition experience, sports development and impacts and sustainability of outdoor activities.

Course Content

Pupils taking this qualification will study five mandatory units:

- Unit A: Careers in the Sport and Active Leisure Industry
- Unit B: Health, Well-being and Sport
- Unit C4: Personal Skills Development in Outdoor Activities
- Unit 24: Health and Safety Factors in Outdoor Learning
- Unit 25: Outdoor Activity Provision.

Option Blocks

The options blocks shown below are for the 2020-2021 academic year and are subject to change for future years. Students should pick one subject from each block

Block 1	Block 2	Block 3	Block 4
Enterprise & Entrepreneurship	CAD	Design Technology	Art
History	Physics	Mathematics	English
Biology	Applied Science	Sport (If doing Double BTEC)	Chemistry
	Geography	Production Arts	Sport

- BTEC Level 3 Sport and Outdoor Activities (equivalent to 1.5 A-Levels) is also available and runs primarily on Wednesday afternoons and Weekends.
- Motorcycle Mechanics will run on a Friday and Saturday mornings.





St David's College

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