



Fourth Form Courses for September 2017

A Guide for Pupils and Parents

CHARTERHOUSE

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The Curriculum

In the Fourth Form the compulsory examined core of the curriculum includes English, Mathematics, Biology, Chemistry and Physics, French, Latin, History, Theology, Art, Design Technology and Music.

There are two choices to be made as follows:

- **Option One** is between German and Spanish
- **Option Two** is between Classical Greek and Geography

Before finalising the timetable with regard to these options, we will take note of advice from the school where a pupil is currently studying and consider a pupil's performance in the Common Entrance, Entrance or Scholarship examinations.

The Fourth Form course allows pupils to maintain and develop or establish their academic interests before they make their (I)GCSE decisions in the May before the Remove year.

Some information about the subjects studied during the Fourth Form is given below. Further information is available from the Head of Department of the subject concerned.

Boys are taught in Forms for the majority of their subjects (the top three Forms are streamed by ability, the other three Forms are mixed ability) and divisioned by ability in Mathematics.

The Core Subjects

English

The Fourth Form English course aims to excite and inspire pupils about the prospect of reading and studying literature, whilst at the same time ensuring that they master the skills that will prepare them for IGCSE study and enable them to read and write with precision. Pupils will study at least three literary texts in detail and undertake a range of creative writing tasks. In addition, they will complete the Charterhouse English Foundation Course, designed to secure the essential principles of spelling and grammar, as well as seeking to build a strong foundation in vocabulary. There is also an emphasis on reading for pleasure: there are regular lessons in the School Library and pupils are encouraged to read widely in their spare time.

Mathematics

Pupils study the following five areas of mathematics and cover the sub topics as follows thereby laying the foundations for future progress:

Number

Percentages, Standard form, Fractions, Accuracy, Ratios, Proportion, Highest Common Factors and Lowest Common Multiples, Using a calculator efficiently, Upper and Lower Bounds and Estimation

Algebra

Simplifying Expressions, Solving equations using formulae, Indices, Inequalities, Factorising and Simultaneous equations

Graphs

Gradients, Linear graphs and Travel graphs

Geometry

Circle theorems, Similar triangles, Pythagoras' Theorem, Trigonometry of a right-angled triangle, Constructions and Loci

Handling Data

Using frequency tables to calculate means

Science

Charterhouse pupils study all three sciences individually to IGCSE in the belief that it is important to ensure both breadth and depth of study, in order that boys have a good understanding of the world around them and a confidence with a range of subjects and disciplines.

Biology

In the Fourth Form, the aim is to inspire and develop the full range of skills that a scientist needs and thus the approach is driven through practical work in order to develop experimental, investigative and analytical skills. The laboratories are filled with rare bottled specimens and taxidermy, as well as the latest molecular and micro-biological equipment.

The course begins with simple measuring experiments and develops to more complex biochemical investigations and dissections. Pupils make presentations to the rest of their form and the discussion of current scientific issues is encouraged. Consideration is given to the nature and variety of living organisms and starts with their cell structures. Comparisons are made between bacterial cells and those of plants, animals and fungi. Microscopy using live cells and fresh tissue, as well as prepared slides, brings this to life. Pupils also learn introductory biochemistry including the structures and uses of proteins, fats and carbohydrates. This knowledge is applied in understanding digestion and enzyme action.

Chemistry

The course provides a thorough introduction to the separate discipline of chemistry, its reactions and industrial applications. All of this is supplemented by practical work which is designed to support the theory and also develop skills in the correct handling of small and delicate equipment as well as hazardous substances.

The study of chemistry in the Fourth Form builds on the Common Entrance syllabus (and other typical senior school preparation courses), with which it has a small number of topics in common (for example the change of states of matter and paper chromatography). It is designed to provide a solid foundation and equip pupils with the tools necessary to master the subsequent two years of the IGCSE course. Pupils will begin their studies with the concept (a simple model) of the atom and examine the types of bonding that are found when atoms form compounds. The reactions of various substances are investigated both in the laboratory and on paper. For this reason a great deal of emphasis is put on the 'language of Chemistry': its symbols and how they are used in the construction of chemical equations.

Physics

The aims of this course are to learn about a wide range of physics topics and ideas as well as to develop and apply problem solving and mathematical skills. Additionally, there is an emphasis on the role of physics in terms of its social, economic and environmental importance.

The Fourth Form affords an opportunity to consolidate work that has been previously studied, as well as extending practical skills and knowledge into slightly more advanced areas of physics. Classroom and experimental work is complemented by the use of IT to research information and to tabulate data, draw graphs and perform some data analysis, mostly using Excel. This range of activities is reflected in the tasks set which includes problem solving, researching information, analysis of experiments and report writing. Topics covered during the year include aspects of motion, electricity, radioactivity and the properties of waves.

Modern Languages

As all boys study French, it is expected that all of them will have an essential awareness of the language prior to arriving at Charterhouse.

All pupils also choose German or Spanish to be studied as a second modern language and this can be studied *ab initio* or as a continuation language.

After the Fourth Form, pupils must study one language of their choice to IGCSE, but they are free to add further languages as optional subjects. This requirement is in the belief that international-mindedness and linguistic confidence are important aspects of our society.

French

Option 1: German or Spanish

The principal aim in the Under School subjects in French, German and Spanish is to encourage confidence and accuracy in the use of foreign languages. Pupils will be taught to express themselves clearly and coherently in a variety of different situations. Emphasis is placed on the steady acquisition and regular use of new vocabulary within a practical context. All four core skills (Listening, Reading, Writing, and Speaking) are comprehensively covered.

Latin

All boys in the Fourth Form will be studying Latin: no prior knowledge of Latin is required. The course offers all pupils the opportunity to develop their linguistic awareness and to be enriched by the experience of the Classical world; this includes learning outside the timetable through society lectures and seminars, debates, competitions and trips.

The aim of the course is to ensure that experienced Latinists consolidate and develop their understanding of the Latin language sufficiently well enough to allow them to undertake further study with confidence. Less experienced Latinists are required to reach a good standard by the end of the year, such that any pupil, regardless of the extent of their exposure to Latin before arrival at Charterhouse, should have covered enough Latin to continue the subject to GCSE should he so choose. The study of Latin at all levels develops analytical skills, problem-solving, and awareness of linguistic concepts, not only in Latin but also English and other modern languages.

The language is not studied in isolation. The course looks at the history of Roman civilisation from its mythical foundations, through to the kingship and the early days of the Roman Republic. Pupils are afforded the opportunity to look at the literature of Virgil and Livy in the original, in order to help develop their literary and historiographical analysis.

History

The Fourth Form History course focuses on the First and Second World Wars. Key events such as the Battle of the Somme, the Battle of Britain and Stalingrad will be analysed, alongside more thematic studies such as the development of weapons and the conditions in which the soldiers had to fight. Questions will also be posed trying to account for the origins of the two wars and why the Allies ended up victorious in both 1918 and 1945: this will allow pupils to consider the implications of short and long term factors in History.

The pupils will not just study military history. The wars will be placed in the political, social and cultural contexts of the time with analysis of the Suffragettes and the development of the early stages of the Cold War. Additionally, time in the year is put aside for a library-based research project on the First World War, and an archives-based project on an Old Carthusian who died in the First World War: here the pupils have an opportunity to work collaboratively and use the School Archives to investigate the life of a boy who was at the School in the early twentieth century.

Theology, Philosophy and Ethics

In a Carthusian's first year, he will have a taste of the many areas of study that make up the subject, whilst he will also learn some of the key skills of analysis, argument, and empathy required to become an effective thinker.

Pupils begin by exploring the very first evidence for any religious belief at all, looking at the development of ideas through early burials, goddess worship, the paintings of the Lascaux Caves, and Stonehenge. They will study the evidence and learn to formulate for themselves what they think the evidence shows that these early people believed in each case. Subsequently, they will then study afterlife beliefs from ancient Egypt, Sumeria (the tombs of Ur), and China (in particular, the terracotta warriors of Qin Shi Huangdi). In several instances, we are fortunate to have artefacts that help collapse the time between us and those we are studying. After this a turn is made to a historical study of Islam and Christianity before taking up the more ethical and philosophical aspects of the course with an introduction to the issue of abortion and a look at some philosophical questions of how we think and know about the world around us.

Art

Studio provides an enjoyable and creative program of study for Art in the Fourth Form and it remains open every afternoon in the aspiration that pupils will use their facilities as and when they wish.

Pupils are exposed to a range of techniques and activities such as ceramics, print-making, painting, drawing and photography. There is also a chance to use Apple Macs to animate and manipulate images. Practical activities are supported through research and through learning about artists and designers from different periods and cultures. Pupils are given a sketchbook and encouraged to draw and develop their ideas independently both within and beyond the classroom.

Design and Technology

Over the year, Fourths are introduced to a range of historical and contemporary design. Pupils are taught basic workshop practice and spend each Quarter pursuing one project to completion. The projects are designed to expose pupils to the broadest range of design and manufacturing techniques so as to provide them with enough of an introduction for further study. Projects include:

- Desk tidy/lamp/mobile phone charger product
- Clock design using laser cutter
- Bottle opener
- USB memory stick (3D Printing)

As well as set projects, pupils are encouraged to use the JDTC facilities outside of hash time to work on their own projects.

Music

The Fourth-Form Music course offers the opportunity to develop a familiarity with Western music (theory, history & analysis), either as a preparation for the IGCSE course from the Remove year, or as a free-standing course that will enable Carthusians to make better sense of what they hear at School concerts and in Chapel for the remainder of their Charterhouse career, and beyond.

No previous musical experience is assumed, and the course aims to help pupils to recognise and understand various styles and devices, and thus to form an appreciation of similarities and differences between composers.

The Option Subjects

Option 1: German or Spanish

See page 7.

Option 2: Classical Greek

One of the principal attractions of studying Classical Greek is that the language, literature and culture of Ancient Greece have had such a profound influence on our own. The aim of this Fourth Form course is to ensure that, by the end of the year, boys know enough of the language for the benefit of further study. Greek works in a very similar way to Latin, so similar skills are required to study it successfully. It is possible to take up Classical Greek in the Fourth Form without any previous knowledge, provided that the pupil enjoys the rigour of tackling new linguistic principles.

As with Latin, boys will be encouraged to develop their ability to approach linguistic problems in a methodical and analytical way, through close attention to detail and synthesising new ideas with previous learning. The material read during this year is from a comprehensive beginners' course which combines rigorous grammatical scaffolding with a wide range of background material from Greek history and culture, including extracts from Aesop's fables and Homer's *Odyssey*. As with Latin, plenty of opportunity for enrichment is offered outside of the curriculum. Boys who have enjoyed Latin at their prep school but who have not yet had the opportunity to study Classical Greek are most welcome, as well as those who already have some experience of the language.

Option 2: Geography

Geography in the Fourth Form is an exciting subject that leaves behind the constraints of the Common Entrance syllabus and enjoys the freedom of not having any public examinations for which pupils are expected to prepare. Study is undertaken of a wide range of local, regional and global issues, whilst simultaneously developing key geographical and IT skills that prepare pupils well for further study of the subject. In OQ, a study is made of local issues, including maps and modern mapping techniques. There is a geology-based section that looks at different rock types around the School. There are also field trips to Hindhead to investigate the impact of the A3 Tunnel and to the Devil's Punchbowl to examine a heathland ecosystem. In LQ, an international perspective is introduced, investigating issues of climate, population, politics and disparity in both Europe and China. In CQ, pupils study the major issues of climate change and globalisation.

There are three continuously assessed projects to complete, one each Quarter, instead of an end of year examination. First, there is the 'Geography in the News' project, in which pupils choose a current news article and explore issues surrounding it. This is followed by a study and subsequent essay on the success of China's "One Child" Policy, before the year is rounded off with the creation of a website on the school's intranet that looks at the London 2012 Olympics and the legacy.

Contact Details

All telephone numbers are +44 (0)1483

Deputy Headmaster (Academic)	Mr JH Kazi	jhk@charterhouse.org.uk	291772
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Master of the Under School	Miss EJ Fox	ejf@charterhouse.org.uk
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Fourth Form Options for Sept 2017

Please fill in the form and then return it to:

The Admissions Office (bridgetgarlick@charterhouse.org.uk) by 1 June 2017

Forename:	Surname:
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Postal Address:	Email address:
	Telephone number:

Choice One:

Please select one language only and record how many years your son has studied the selected language:

German		Spanish	
	Years of study		Years of study

Choice Two:

Please select one subject:

Classical Greek	Geography

Languages:

All boys study French and Latin: please record how many years your son has studied of each of these languages:

	Years of study
French	
Latin	

Please provide any additional and relevant information with regards to your son's previous exposure to French, German or Spanish (e.g.: bilingual, mother tongue, educated in a foreign language medium etc.):