



Prince Henry's Grammar School  
COLLABORATIVE LEARNING TRUST



# A Guide to choosing A-level Courses

## A guide to choosing your A-level courses

Most students in the Sixth Form will select **three** A-level courses, or a combination of A-level and BTEC/Applied courses, and will continue with these courses for two years (this is a change from the old modular system in which students chose four courses in Y12 and dropped back to 3 in Y13.) Without a 'drop' subject, it is more essential than ever that students make informed subject choices. It will still be possible to take four A-level subjects, but this is only recommended for students with very strong GCSE results as the workload is considerable.

Different universities have different requirements in terms of subject combinations, and certain courses at university will have very specific subject requirements. It is important to choose subjects at A-level which you think you will enjoy and want to study, but it is also important to select subjects in which you will be able to achieve a good grade and which keep your options open for the future. There is no point in choosing a subject which you think you **should** do if you are unlikely to get a good grade in this subject through lack of interest or aptitude. On the other hand, you need to think about your combination of subjects so that you do not close down opportunities for the future.

### Facilitating subjects

The Russell Group universities (the 24 leading UK universities) have traditionally published a list of **facilitating subjects** which were preferred for entry to competitive courses, however this year they have recognised that their advice led to undue narrowing of A-level options and so they have changed their approach to focus more on either groups of subjects which may be useful for particular types of degrees for students who are not sure of their next steps or the specific subjects required for particular degrees if students have a clear direction in mind.

This information can be found at [www.informedchoices.ac.uk](http://www.informedchoices.ac.uk) and the main points are summarised below.

### Subject choices for certain types of course

Although many are often not sure of exactly what they want to do at university, a lot of students in Year 11 have a general idea of the sorts of subjects that appeal to them. Certain groups of subjects at A-level can give you the most flexibility for degree courses in broad areas of study.

## Science and maths courses

Most students who are interested in studying some form of science degree will take a combination of chemistry, biology, physics and maths. Some students prefer to study two sciences and one arts/humanities subject in order to retain a broader range of options. It is possible to study three science subjects and one humanities subject at PHGS, but this is only recommended for students with strong GCSE results as four A-levels is a very difficult challenge and not required by universities for entrance. If you are interested in a science course at a Russell Group university it is usually important to take **two** science subjects.

Science courses at university tend to fall into two broad camps:

**Biological/life sciences** – degrees based on chemistry and biology such as pharmacology, biochemistry, biomedical science and environmental sciences. For most of these courses you will usually need chemistry **and** biology A-levels. Maths is also a requirement for many chemistry courses.

**Physical sciences** – degrees based on maths and physics including engineering. Maths **and** physics A-levels are essential here, and further maths is very useful if you are a talented mathematician. For some maths and engineering degrees, further maths is mandatory. Other courses including forensic science would also require biology and/or chemistry.

**Medicine, dentistry and veterinary sciences** – to keep all medical school options open you need to take chemistry, biology and one from maths or physics. If you do chemistry and biology this will keep the vast majority of options open. Chemistry plus one from maths or physics will allow some medicine choices but will reduce the range of options. For dentistry, most courses require chemistry and biology, some require a third science subject as well. For veterinary science, chemistry and biology plus either maths or physics will keep the most options open. Some universities prefer two sciences and an essay-based subject but this is rarely mandatory. Most courses also require an entrance exam and prefer to see work experience in this field. Strong GCSE results are also needed as these are part of selection. Admissions tutors strongly recommend that students only study 3 subjects at A-level (with the exception of Cambridge where 4 subjects is not mandatory, but many students who are accepted have studied 4.)

## Social Sciences

Social sciences include business, economics, law, politics, geography, psychology and sociology amongst others and involve studying aspects of human society. As the content of these courses obviously varies a lot, the subject requirements also vary. Economics often requires maths or core maths. Some psychology courses require a science A-level. Others have no specific requirements and very few expect you to have studied that particular subject at A-level.

## **Language courses**

Studying one language at A-level along with another strong academic subject will give access to a wide range of language degree courses. A student who can offer two languages at A-level will be highly sought after by universities and will often be able to select a course which offers a new language from scratch, as they have proven ability in the field. One language at A-level can also be very useful for entry onto combined degree courses such as International Business with a language.

## **Humanities courses**

Humanities is the study of human culture. Courses include history, philosophy, religious studies/theology, and English literature. Often courses such as history expect you to have studied the subject at A-level whereas philosophy courses encourage you to study related subjects but this is not required. Maths is useful for some philosophy courses and most universities would prefer to see at least one essay-based A-level.

## **Creative arts courses**

These include music, art, photography, drama, fashion, design and film-making. Studying a similar subject at A-level is often useful. For music courses, performance based music exams are also helpful. Many art students study an FE foundation course before moving on to an art degree. For dance and drama students, extra-curricular performance work will help build up the skills for audition. Creative arts students may choose the conservatoire route rather than university. A conservatoire is a specialist music and/or drama college which has a strong performance orientation and prepares students for working in the industry.

## **BTECs and other Vocational Qualifications**

Many Russell Group universities will accept some BTEC/Vocational subjects for many of their courses and most other universities accept all BTEC/Vocational subjects. In general, the single A-level equivalent Extended Certificate BTEC/Vocational subjects (offered at PHGS) combined with some A-level subjects are more widely accepted than the three A-level equivalent BTEC courses (usually offered at FE colleges). BTECs have always been readily accepted for more vocational degree courses but are now also accepted for a range of academic degrees. The individual university websites give more guidance here, but these courses are far more widely accepted (and more rigorous!) than many students and parents expect. The final outcome is often more influential than the style of course so it may be better for a student to get a strong grade in a BTEC course rather than a lower grade in a traditional A-level course. This change is useful for students who excel in coursework and portfolio style assessments, although all BTECs do involve examined elements.

## **Other universities and career options**

Obviously the Russell Group universities are not the only option post-18, and other universities may well be higher up in the rankings for certain courses. The 'teaching' universities often have a strong reputation for a particular area of study and are happier to accept a wider range of A-level and BTEC/Vocational courses. For example, Leeds Beckett University is very highly ranked for Sports courses, Manchester Metropolitan University is widely known for Primary teaching courses, and Edge Hill University consistently tops the polls for best overall student experience. Russell group universities are geared towards research and expect a high level of independent learning from their students, whereas other universities are more geared towards teaching and will offer more guidance throughout degree courses. Russell group universities still tend to assess mainly through examination whereas some other courses are assessed primarily through portfolios of work. The choice of university, and therefore of A-level subjects, needs to be based on your individual strengths and weaknesses, and not simply on which is perceived to be the 'top' institution. University is expensive and you need to invest in yourself wisely.

### **Apprenticeships and Internships**

There are a wide range of alternatives to university available, including degree-level apprenticeships and internships that can also lead to degree level qualifications while working for a major company. Some apprenticeships, such as those in Engineering, have very similar A-level requirements to the equivalent degree courses, while others are simply looking for three good A-level grades in any subject. If you have a particular career path in mind, then seek advice from the Sixth Form team about the most appropriate A-level choices. Often these will be similar to the recommended courses listed below for each subject.

### **Careers and the jobs market**

It is also worth reflecting on the changing jobs market and on the skills and abilities that will be beneficial for the future. Many jobs that pay good salaries now did not even exist 10 years ago and this rate of change is unlikely to slow. For example, in the local area one of the fastest growth areas for jobs is in the field of IT and digital media. Whereas in the past IT and Media qualifications may have been seen as a 'soft option' at A-level, this is no longer the case as the need for skills in this area is urgent and the qualifications reflect the rigour required to succeed in a growing market. The vocational qualification in digital media offered at PHGS can be studied alongside traditional A-levels and offer a clear route into this growing industry. Likewise the applied science and health and social care qualifications offer good progression into the healthcare industry and often produce stronger outcomes for hard-working students who may find a purely exams-based approach off-putting.

## **If you know what you want to study after Sixth Form**

Universities vary in their entry requirements for different courses, and the only way to be completely certain is to check the individual university websites, however, the list below shows the most common subject requirements for some of the most popular degree courses.

### **Accountancy**

Essential: Maths is required for one or two universities

Useful: Maths, Business Studies (including BTEC), Economics

### **Aeronautical Engineering**

Essential: Maths and Physics

Useful: Further Maths, Product Design, Computer Science

### **American Studies**

Essential: Varies, but often History and/or English Language or Literature

Useful: Politics

### **Anthropology**

Essential: none

Useful: Biology, Sociology, History

### **Archeology**

Essential: some courses may require a science subject

Useful: History, Geography, any science subject, any language, Religious Studies (EPR)

### **Architecture**

Essential: Some may require Art and most look for a mixture of arts and science subjects

Useful: Art, Maths, Design Technology, Physics, Religious Studies

### **Art and Design**

Essential: Art or Design Technology.

Useful: Product Design. Many Fine Art students will do an Art Foundation course following A-levels

### **Biochemistry**

Essential: Chemistry. Some universities also require Biology while others ask for one from Physics/Biology/Maths

Useful: Biology, Maths, Further Maths, Physics, Computer Science

### **Biology**

Essential: Biology, usually Chemistry but sometimes just a second science subject

Useful: Maths, Physics, Computer Science

### **Biomedical Sciences**

Essential: Two subjects from Chemistry, Biology, Maths and Physics

Useful: Maths, Further Maths, Biology, Chemistry, Physics

### **Business Studies**

Essential: none

Useful: Maths, Business Studies (including BTEC) and Economics

### **Chemical Engineering**

Essential: Chemistry and Maths (and sometimes Physics)

Useful: Physics, Biology, Further Maths, Computer Science

### **Chemistry**

Essential: Chemistry and often Maths

Useful: Maths, Physics, Further Maths, Biology, Computer Science

### **Childhood Studies**

Essential: none

Useful: Psychology, Health and Social Care (including BTEC)

### **Civil Engineering**

Essential: Maths and usually Physics

Useful: Further Maths, Chemistry, Biology, Computer Science, Product Design, Geography

### **Classical Studies**

Essential: none (unless Classics in which case Latin or Ancient Greek A-levels are often required although some courses will let you start these languages from scratch)

Useful: Modern Foreign Language, English Literature, History

### **Computer Science**

Essential: Usually Maths or Computer Science

Useful: Maths, Further Maths, Computer Science, Physics, Philosophy (EPR), ICT

### **Dentistry**

Essential: Chemistry **and** Biology (some also require Maths or Physics)

Useful: Maths, Physics, Further Maths

### **Dietetics**

Essential: Chemistry, Biology

Useful: Maths

### **Drama**

Essential: Some courses ask for English Literature. A few require Drama or Theatre Studies

Useful: English Literature, English Language, Drama, Theatre Studies, Performing Arts (BTEC not accepted by some Russell Group universities but many other good universities do accept it)

### **Economics**

Essential: usually Maths

Useful: Economics, Computer Science, Business Studies, History

### **Electrical/Electronic Engineering**

Essential: Maths, usually also Physics

Useful: Further Maths, ICT, Design Technology, Computer Science

### **Engineering**

Essential: Maths and Physics

Useful: Further Maths, Design Technology, Computer Science

## **English**

Essential: English Literature or English Language

Useful: History, Religious Studies (EPR), Politics, a modern foreign language

## **Environmental Science/Studies**

Essential: most courses ask for two from Biology, Chemistry, Maths, Physics and Geography. Some courses will accept Applied Science (not usually Russell Group)

Useful: Another subject from the list above (not essential though)

## **European Studies**

Essential: A modern foreign language

Useful: Another language, English Literature, History, Politics, Religious Studies (EPR)

## **French**

Essential: French

Useful: Another modern foreign language, English Literature, History, Politics

## **Geography**

Essential: Geography

Useful: Some BSc degrees prefer a science subject.

## **Geology**

Essential: Usually two science subjects

Useful: Geography, Computer Science, Maths, Physics, Chemistry, Biology

## **German**

Essential: German

Useful: Another modern foreign language, English Literature, History, Politics

## **History**

Essential: most degrees require History

Useful: Economics, Religious Studies (EPR), English Literature, Politics, Sociology, Languages

## **History of Art**

Essential: none

Useful: Art, English Literature, History, Religious Studies (EPR), Languages

## **Italian**

Essential: Italian or another modern foreign language

Useful: Another modern foreign language, English Literature, History, Politics

## **Law**

Essential: usually none, but sometimes English Language or Literature

Useful: History, Religious Studies (EPR), Politics, a modern foreign language. At least one essay-based subject. A-level Law is not a requirement for any law degree course.

## **Management Studies**

Essential: sometimes Maths

Useful: Maths, Economics, Business Studies (including BTEC)

## **Materials Science**

Essential: Two from Chemistry, Maths, Physics, Biology plus occasionally Design Technology

Useful: Chemistry, Design Technology, Further Maths, Computer Science

## **Mathematics**

Essential: Maths and sometimes Further Maths

Useful: Further Maths, Physics, Computer Science

## **Mechanical Engineering**

Essential: Maths and usually Physics

Useful: Further Maths, Product Design, Computer Science

## **Media Studies**

Essential: some courses ask for English or Media Studies

Useful: English, Media Studies, Psychology, ICT

## **Medicine**

Essential: Chemistry, Biology and one from Maths or Physics gives access to the widest range of medical schools. Chemistry and Biology keeps most options open. Chemistry and one of Physics or Maths gives access to a smaller range of courses. Most Medical schools strongly recommend that you only study 3 A-levels with Cambridge being the only one whose students have mostly studied 4.

Useful: Further Maths, Computer Science or a contrasting non-science academic subject.

## **Music**

Essential: Most traditional courses require Music A-level and Grade VII or VIII. Some universities accept Music Performance or Music Technology BTEC. Others will accept strong performers with no academic music qualification.

Useful: some universities prefer at least one essay based subject

## **Nursing and Midwifery**

Essential: Many courses require Biology or another science (often includes Psychology).

Applied Science and Health and Social Care accepted by a range of universities. Some have no specific subject requirements

Useful: Biology, Psychology, Chemistry, Maths, Physics, Health and Social Care, Applied Science, Sport or PE

## **Occupational Therapy**

Essential: some courses require Biology or Applied Science

Useful: Psychology, Physical Education or Sport, another science subject

## **Optometry**

Essential: Two from Biology, Chemistry, Maths or Physics

Useful: Further Maths, Computer Science. Applied Science accepted at some universities.

## **Pharmacy**

Essential: Chemistry and one from Biology, Maths and Physics – Chemistry and Biology are the most commonly required.

Useful: Maths, Physics, Computer Science

## **Philosophy**

Essential: none (occasionally Maths is required)

Useful: Maths, Religious Studies (EPR), Classical Civilisations, History

### **Physics**

Essential: Maths and Physics

Useful: Further Maths, Chemistry, Computer Science

### **Physiotherapy**

Essential: Biology. Some courses also require a second science subject. PE, BTEC Sport, Applied Science or Health and Social Care accepted at some universities as an alternative to biology.

Useful: Chemistry, Maths, Physics, Psychology

### **Planning**

Essential: sometimes Geography

Useful: Geography, Maths, Economics

### **Politics**

Essential: none

Useful: Politics, History, Law, Economics, Religious Studies (EPR), English Literature, Business Studies

### **Psychology**

Essential: A few courses ask for one science subject

Useful: Biology, Maths, Psychology, Sociology, Chemistry, Computer Science

### **Religious Studies/Theology**

Essential: none

Useful: Religious Studies (EPR), English Literature, History

### **Sociology**

Essential: none

Useful: Sociology, Psychology, Geography, Religious Studies (EPR), Computer Science

### **Spanish**

Essential: Spanish

Useful: Another modern foreign language, English Literature, History, Politics

### **Speech Therapy**

Essential: Sometimes a science subject, Biology is sometimes specified, but some degrees will accept candidates with no science A-levels.

Useful: A modern foreign language, English Language, Psychology, Applied Science

### **Sports Science/Physical Education**

Essential: Many courses require a science subject, although A-level PE often covers the science requirement

Useful: Biology, Physical Education, Sport BTEC, Psychology, Applied Science

### **Surveying**

Essential: none

Useful: For some types of surveying, Maths and Physics, for Estate Management, any combination is usually acceptable.

### **Teacher Training (primary)**

Essential: At least one from English, Geography, History, Maths, Music, Physical Education, Religious Studies (EPR), a science subject.

Useful: Another of the subjects listed above, Psychology.

### **Teacher Training (secondary)**

Essential: At least one from Art, Biology, Chemistry, Computer Science, Design and Technology, Drama, English, French, Geography, German, History, ICT, Italian, Maths, Music, Physics, PE, Religious Studies (EPR), Spanish

Useful: Another of the subjects listed above

### **Veterinary Science/Medicine**

Essential: Chemistry and Biology plus one from Maths or Physics

Useful: Further Maths

### **A word about GCSE courses**

GCSE results are **very** important. You are unlikely to get a place on a degree course without GCSE Maths and English at Grade 4 or above and often grade 5. Some courses will also expect at least grade 5 in science. For courses at Oxford and Cambridge, and for Medicine courses, at least 6 GCSEs at grade 7-9 (or grade A\*/A) are expected, with many universities requiring 8 or even 10 GCSE passes at this level.

Your GCSE results are also used to decide whether you will be capable of studying a subject at A-level, and many courses ask for a grade 5 or 6 at GCSE in your chosen subject.

For further advice about A-level courses please speak to the Sixth Form Team. Useful information about the requirements for particular degree courses at individual institutions can be found on Unifrog, the UCAS website or on individual university websites.