

A Russell Group guide to making decisions about post-16 education

2016/17

## How to use this guide

To make this document easier to use, the following design elements have been adopted:

## ATTENTION!

## Text inside this large arrow is of particular importance

- URL links which direct you to websites appear in a different text style, as in domain.ac.uk. These are clickable.
- Links which navigate to other sections of the document appear in a different text style, as in $ゅ$ chapter name.
- You can move forwards and backwards between pages by: using the left and right arrow keys on your keyboard using the left and right buttons on your mouse using the wheel on your mouse using the red and yellow arrows in the top-left corner of the page
- You can go to specific sections by clicking on a link in the list of content in the left-hand sidebar.
- To access a printer-friendly version of this guide, click the printer $\square$ icon on the navigation bar on the left.


## Foreword

Welcome to the fifth edition of Informed Choices. We hope that you wil find this a helpful guide as you consider the best courses and subjects for you to study in the sixth form or at college. We also hope that your parents or carers, teachers and advisers who are helping you make these important decisions will find it useful too.

The Russell Group of Universities has produced this guide because we think that it is really important for all young people - especially those whose parents didn't go to university - to have clear information about how the subjects that they choose to study in the sixth form or at college can affect their options at university and their chances in life. That way, they can make well-informed decisions.

As a group of 24 leading universities in the UK, we want to help ensure that young people are well-informed. We have developed this guidance in close consultation with admissions staff and managers in all Russell Group universities and with very helpful advice from the Institute of Career Guidance.
When it comes to choosing your A-levels or other advanced level qualifications, it can be tempting simply to choose subjects that you enjoy and which interest you. But it's also important to think a bit further ahead and to consider what you might want to do in the future.

If the idea of going to university appeals - whether or not you know which subject you want to study - having the right information now will give you more options when the time comes to make up your mind. There's no getting away from the fact that the subjects you study in the sixth form or at college will determine which degree courses will be open to you in future.

For some degrees you will be required to have studied a particular subject or subjects beforehand. It is really important that you do not make things harder for yourself by choosing subjects which won't equip you for your chosen university course or show your talent for a particular subject.

If you don't yet know what you'll want to study at university, there are some subjects which will keep your degree options open until you decide which course to take. This guide will help you to see which advanced level subjects - which we call 'facilitating subjects' - open doors to more degrees and more professions than others. It's not about 'hard' or 'soft' subjects, but those which keep your options open.

## Foreword (continued)

Although choosing the right subjects to study in the sixth form or at college is an important first step towards university, it doesn't guarantee you a place on your chosen course. Entry to Russell Group universities, in particular, can be highly competitive. Your exam results are vitally important, but they are only one of several things universities will take into account when they consider your application.

Russell Group universities take a range of factors and information into account to ensure that we can identify the candidates with the most ability and potential to excel on our courses - whatever their social or educational background

Russell Group universities are absolutely committed to doing everything possible to ensure students have clear information on typical university entrance requirements. We hope that you find this guide useful, and wish you every success in your studies.

## The Russell Group

The Russell Group represents $\boldsymbol{2 4}$ leading UK universities which are committed to maintaining the very best research, an outstanding teaching and learning experience for students of all backgrounds and unrivalled links with business and the public sector.
Visit http://www.russellgroup.ac.uk to find out more.

## ATTENTION!

All Russell Group universities provide detailed information about entry requirements on their websites or in their prospectuses. Although there are common themes, entry requirements (even for very similar courses) can vary from one university to another so you should only use the information provided in Informed Choices as a general guide. As your plans become firmer, it's essential that you check with the university to be sure that you are aware of the most up-to-date entry requirements for your chosen course.

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## Post-16 qualifications and how they are organised

As well as your advanced level qualifications you might also consider the Extended Project Qualification (EPQ) which provides the opportunity to develop valuable independent study and research skills. Russell Group universities value the EPQ which can be drawn upon in your personal statement and at interview to provide evidence of enthusiasm for your chosen subject. Some Russell Group universities may also include the $E P Q$ in their offers - check individual university guidance for more information.

You should be aware that, on top of academic requirements, some universities require applicants to sit admission tests for certain courses Be sure to check entry requirements and guidance on university websites.

## A-levels

The structure of A-levels in England is changing between September 2015 and September 2017. Newly structured A-levels are being introduced in three phases as shown in the table below:

## Newly structured A-levels to be taught from...

September Art and Design, Biology, Business, Chemistry,
2015 Computer Science, Economics, English Language, English Language and Literature, English Literature, History, Physics, Psychology, Sociology
September Ancient Languages (Classical Greek, Latin), Dance,
2016 Drama and Theatre, Geography, Modern Foreign Languages (French, German, Spanish), Music, Physical Education, Religious Studies
September Accounting, Ancient History, Archaeology, Classical 2017 Civilisation, Design and Technology, Electronics, Environmental Science, Film Studies, Further Mathematics, Geology, Government and Politics, History of Art, Law, Mathematics, Media Studies, Music Technology, Philosophy, Statistics

A full timeline of qualification reform is available on the UCAS website: https://www.ucas.com/advisers/guides-and-resources/qualification-reform/qualification-reform-timeline

Under the old structure A-levels were made up of the AS-level and A2, with each part contributing 50\% to the overall A-level grade. In newly structured A-levels students will be examined at the end of a (typically) two-year course. AS-levels will be standalone qualifications and will no longer contribute to the overall A-level grade.
For the purposes of applying to university, where the AS-level is taken as a standalone qualification, it will be worth $40 \%$ of an A-level. As a result of this repositioning, universities may no longer accept two AS levels in place of one A-level in their offers.
It's important to note that, generally speaking, Russell Group universities make offers of places based on three A-level grades. However, some courses at some universities (for example some Medicine degrees) also ask for a fourth AS-level and some universities see particular educational value in students taking AS-levels. You should therefore check entry requirements and guidance on university websites when deciding whether or not to take additional AS subjects.

Russell Group universities are used to assessing applications in a wide range of contexts and understand that schools and colleges may differ in how they deliver the curriculum. They are committed to treating all applicants fairly so if it has not been possible for you to take AS-levels or a fourth AS subject, make sure this is noted in your academic reference.

You can find a list of useful links on the Russell Group website: http://russellgroup.ac.uk/for-students/how-do-russell-group-universities-view-the-as-level/
UCAS also provide useful information on their website:
https://www.ucas.com/advisers/guides-and-resources/qualification-reform/applying-he-reformed-qualifications

## Practical Science

From 2015, if you take a science A-level in England you will receive a separate 'pass'/‘not classified’ mark for the practical element. This will not contribute towards the overall A-level grade and there is no direct relationship between the science practical grade and examination grade, although the examination will draw upon the practical experiences of a learner.

If you are applying with a science A-level some universities will require a 'pass' in the practical as well as setting an overall grade requirement even if you are not applying for a science related degree course. Other universities may only require a pass if you are applying for certain courses (for example engineering or science degrees) and some may make no requirements on the practical element. It is important to check individual university websites for guidance.

## How are A-levels organised in Wales and Northern Ireland?

A-levels offered by the exam boards in Wales and Northern Ireland are also being gradually reformed. Some of the new A-levels in Wales are already being taught, with more due to be introduced in 2017. In Northern Ireland all of the new A-levels were brought in for first teaching in 2016.

In both Wales and Northern Ireland the new A-levels will continue to be made up of the AS-level and the A2. However, the weighting of the AS will change, with revised AS levels contributing $40 \%$ to the overall A-level grade.

## If I want to apply to university, what do I need to think about when making my AS- and A-Level choices?

Subject requirements and the number of qualifications required for entry will vary between universities, therefore it's also important to check individual university websites for further details on their entry criteria.
Your choice of subjects will be key to determining the university courses open to you. The guidance provided in this booklet on $\rightarrow$ subject requirements will help you to make informed choices about your A-level subjects.

Students in Wales studying A-levels as part of the Advanced Welsh Baccalaureate Skills Challenge Certificate should also read the guidance on page 13.

## Scottish Highers, Advanced Highers and Baccalaureates

## How are they organised?

Under the Curriculum for Excellence the combination of qualifications you will study in your senior phase (S4 to S6) will depend on the school you attend.
Typically, you will study towards four or five Highers over your fourth and/or fifth years of secondary school (S4 and/or S5). Some students may take a combination of Highers and Advanced Highers between S4 and S6 and some may also study for the Scottish Baccalaureate. For more information see www.educationscotland.gov.uk
Highers usually consist of units of work set and marked by teachers and an external examination.

Advanced Highers are usually made up of three units achieved by passing an internal assessment which may consist of coursework, tests or practical work and a fourth unit which is assessed externally, usually through a examination or project. Before taking an Advanced Higher, you will normally have studied the subject at Higher level.

There are four Scottish Baccalaureates - one in Science, one in Languages, one in Expressive Arts, and one in Social Sciences. Students study Mathematics or English/Gàidhlig, two courses from a list of eligible subjects, and undertake an interdisciplinary project. Two out of the three courses must be at Advanced Higher level with the remaining course at Higher level.

If I want to apply to university, what do I need to think about when making my Scottish Higher subject choices?

How you approach your choice of Highers and/or Advanced Higher subjects may depend on whether you are thinking of studying at a Scottish university or whether you want to study in other parts of the UK.

Many universities in England, Wales and Northern Ireland accept Scottish Highers for entry to their degree programmes. However, for many courses at Russell Group universities you will also be asked for one or more Advanced Higher in addition to your Highers so it's advisable to check entry requirements at a fairly early stage.
If you are looking to progress to a Scottish university it is likely that the entry requirements will be expressed in terms of Highers but may also include Advanced Highers, for example for Medicine. Achievement of Advanced Highers in relevant subject areas may make direct entry to the second year of a degree programme a possibility.
When selecting your choice of study for the senior phase it is very important to research the entry requirements of any universities you may be interested in. Scottish universities traditionally seek breadth of study as a preparation for the first year of undergraduate study and may require you to demonstrate achievement across four subjects, or more if over two sittings.

Please see the guidance later in this booklet on $\leadsto$ subject requirements for additional information to support your choices.

## Advanced Welsh Baccalaureate

## How is it organised?

The Advanced Welsh Baccalaureate consists of two parts:
Core "Skills Challenge Certificate": consisting of three Challenges and an Individual Project, graded $\mathrm{A}^{*}-\mathrm{E}$.
Supporting qualifications: GCSE English Language or GCSE Welsh Language at grade A*-C, GCSE Mathematics - Numeracy at grade A*-C, and two $A$-levels (or their equivalents) graded $A^{*}-E$.

The Advanced Welsh Baccalaureate allows direct entry to university.

## If I want to apply to university, what do I need to think about when making my Advanced Welsh Baccalaureate choices?

Your choice of options will be key to determining the university courses open to you. Generally speaking, alongside a good pass in the Core, universities will expect you to be taking two or three A-levels (equivalents such as BTEC may also be acceptable) as part of your Welsh Baccalaureate. Please see university websites for further details on A-level requirements, and the guidance later in this booklet on $\star$ subject requirements for additional information to support your choices.

## International Baccalaureate Diploma

## How is it organised?

The International Baccalaureate (IB) Diploma programme comprises:

- Six subjects, chosen from across the different subject groups
- Three studied at higher level
(courses representing 240 teaching hours)
- Three studied at standard level (courses representing 150 teaching hours)
- Three compulsory core components
- An extended essay
- A course on the Theory of Knowledge
- A component called 'creativity, action, service' which requires that students actively learn from the experience of doing real tasks beyond the classroom.


## ATTENTION!

Although it is possible to seek certification of individual subjects studied, many universities require completion of the full Diploma for admissions purposes and will not accept individual IB certificates.

If I want to apply to university, what do I need to think about when making my IB choices?
The International Baccalaureate is well-established as a qualification, having been offered in international schools worldwide for many years. In recent years, a growing number of UK schools have started to offer the International Baccalaureate as an alternative to A-levels.

University Admissions staff have a lot of experience of assessing IB applicants and are more than happy to accept it for university entry purposes.

If you are studying for the IB, your choice of higher level subjects will be key to determining the university courses open to you. The guidance provided in relation to $m$ subject requirements shows which degree courses are likely to require an advanced level qualification in a certain subject. For IB applicants this guidance can be used to identify the degree courses most likely to require you to have studied a certain subject at the higher level within the IB.

Individual higher level subjects may also be taken as standalone qualifications. These may be accepted in combination with A-levels or other Level 3 qualifications. Check entry requirements carefully before choosing this as an option.
It is less usual for universities to require particular subjects at standard level within the IB although you should always check entry requirements carefully before applying to be certain of this.

## Cambridge Pre-U

The Cambridge Pre- $U$ is a qualification aimed particularly at 16-19 year olds who want to go on to university.

## How is it organised?

You will typically choose up to four Pre-U Principal Subjects to study over a two-year period. In each subject you will sit one set of exams at the end of the two years of study.

If you are aiming to obtain a Cambridge Pre-U Diploma, you will need to take:

## - Any three Principal Subjects, and

- The Global Perspectives and Research (GPR) course.

Your final Diploma mark will be based on the total of the scores for your three Principal Subjects and the core component, GPR.
Individual Pre-U subjects can also be taken in combination with other qualifications such as A-levels. Within the Cambridge Pre-U Diploma it is possible to substitute one or two of the Principal Subjects for A-levels.

## If I want to apply to university, what do I need to think about when choosing my Pre-U Principal Subjects?

Although it is a relatively new qualification, universities are already familiar with the Pre-U and are happy to consider candidates applying with the Cambridge Pre-U Diploma or one or more Principal Subjects in combination with A-levels. It is likely that universities will expect you to have studied at least three Principal Subjects and/or A-levels. (It is not a good idea for you to be examined in the same subject for both Pre-U and A-level.)

Your choice of Principal Subjects will be key to determining the university courses open to you. The guidance provided in relation to subject requirements shows which degree courses are likely to require an advanced level qualification in a certain subject. For Pre-U applicants this guidance can be used to identify the degree courses most likely to require you to have studied a certain Pre-U Principal Subject. Not all universities will necessarily include the GPR component in offers.

## Extended Project Qualification

The Extended Project Qualification (EPQ) is equivalent in size to half an A-level and is available as a standalone qualification. It is a single piece of work of a student's choosing that requires evidence of planning, preparation, research and independent learning. The piece of work could be:

- A research based written report
- A production (e.g. a fashion show or charity event) and accompanying written report
- An artefact (e.g. a piece of music, art or product) and accompanying written report

Undertaking this kind of work considerably improves students' skills in time management, academic writing, referencing, and critical analysis, amongst others

For this reason the EPQ is valued by Russell Group universities and some may include it as part of an offer made to a student (for example in place of a fourth AS-level). You should check university websites for degree entry requirements.
Even if not included in formal offers, taking an EPQ can be viewed favourably by Russell Group universities. You can talk about it in your application and at interview to demonstrate interest and aptitude for your chosen degree course; if your EPQ topic is not obviously linked to the degree you're applying for make sure you explain how the skills you've developed are relevant.

## Core Maths qualifications

'Core Maths' refers to a group of mathematics qualifications available in England. They are designed for students who have achieved a grade $A^{*}-C$ in GCSE, and wish to continue studying maths but are not taking it at AS or A-level.

There is more information on the Core Maths qualifications at: http://www.core-maths.org/about-core-maths/students/

Russell Group universities value mathematics skills for many different degree courses and many have GCSE or equivalent requirements Mathematical and statistical problem solving, data analysis and interpretation skills can be useful for a wide variety of undergraduate degrees, and a Core Maths qualification may help you to improve and maintain these skills, especially if you are not taking AS or A-level Maths/ Further Maths.

In certain circumstances, for example if a student has not met a minimum GCSE maths requirement, some universities may also consider achievement in a Core Maths qualification instead. You should check individual university websites for more information.

Many degree courses require A-level or AS-level Maths and sometimes Further Maths as part of their entry requirements.


It is very important to be aware that where a university requires AS- or A-level Maths or Further Maths, a Core Maths qualification is not a suitable substitute.

## Vocational options

When it comes to choosing your post-16 qualifications and subjects your school or college may offer a variety of vocational options. Some universities consider vocational qualifications for entry to some courses and a growing number of students are entering higher education with a mixture of academic and vocational qualifications.

It is very important to know, however, that vocational qualifications are not always a suitable pathway towards studying for a degree at a Russel Group university. Certain vocational qualifications may only be suitable for selected degree subjects or may not meet the criteria for entry at all.

Where vocational qualifications are accepted, some universities specify they must be studied alongside other academic qualifications like A-levels, and certain GCSE or other standard level requirements may apply; doing a vocational course will not exempt you from these requirements. It may also be the case that a university only accepts vocational qualifications in certain subjects. It is very important that you check entry requirements for individual universities to find out their position on accepting vocational qualifications.

## BTEC qualifications

BTECs are vocational qualifications that come in many different subjects, sizes and at different levels. Some BTEC qualifications have recently been redesigned with the aim of making them better suited to preparing students for higher education. It is becoming increasingly common for students to take vocational qualifications, like BTECs, alongside A-levels

## am thinking about studying for a BTEC qualification - what are the issues when it comes to university application?

Entry requirements vary between courses and between universities Some BTEC qualifications only allow progression onto certain degree courses.

However, although BTECs have recently been redesigned it is very important to know that they may not be considered suitable preparation for many Russell Group degree courses. If you intend to study at a Russell Group university we would advise you to check entry requirements carefully to see whether a BTEC would be a suitable route for the degree you are interested in applying to

As with other qualifications, it is likely that in order to meet the entry requirements you will need to achieve very high grades. A few universities specify their requirements in terms of performance in individual units rather than on the basis of the overall grade(s). Some universities will only accept BTECs in certain subjects and you may also be required to have studied other qualifications such as A-levels alongside a BTEC qualification. You should check individual university websites for guidance.

## OCR Level 3 Cambridge Technicals and other 'technical' qualifications

Like the BTEC qualifications, OCR Level 3 Cambridge Technicals are available in many subjects and in different sizes (meaning the amount of study and assessment time varies between qualifications). They too, have recently been redesigned to make them more suitable for progression to higher education and can also be combined with academic qualifications such as A-levels.

All of the same comments we make above regarding BTECs are applicable to the OCR Cambridge Technicals. It should be noted that other 'Technical' qualifications are available and if you are considering studying for these you should contact the university that you are thinking of applying to in order to discuss their suitability for entry.

## Technical Baccalaureate (TechBacc)

The TechBacc is a school/college performance measure and is not a qualification. Students achieve the TechBacc if they successfully complete all of the following:

## - An approved level 3 technical qualification

- A Level 3 Mathematics qualification, such as A-level Maths or 'Core Maths'


## - The extended project (EPQ)

As the TechBacc is not a qualification in its own right it is unlikely that Russell Group universities would make offers on the basis of 'achieving the TechBacc'. You may, however, be made an offer on the basis of some or all of the qualifications which make up the TechBacc. You should contact the universities you are considering applying to for further guidance.

## CACHE Level 3 Diplomas

The CACHE Diplomas in Child Care and Education and Early Years Education and Care are qualifications focusing on knowledge and understanding of child development and education, awarded by the Council for Awards in Care, Health and Education.

## If I want to apply to university what are the issues if I choose the

 CACHE Level 3 Diploma?While these courses enable you to become fully qualified as a child care worker, they are also a route to some university courses. Students with high grades and the relevant GCSE passes do progress onto some (but a limited number of) courses at Russell Group universities, such as Childhood Studies, Sociology and subjects allied to Medicine, for example Nursing. Where this is possible, there is very often some sort of link between the content of the CACHE course and the intended degree course, for example CACHE contains Sociology which would be relevant to a degree in Sociology.

## ATTENTION!

When applying to university we would advise you to check with Admissions staff to see if the CACHE Diploma meets the entry requirements for your chosen course.


## ATTENTION!

It is very important that you are aware that these vocational qualifications are not considered to be suitable preparation for some university courses

qualifications and university entry


## Pre-16 qualifications and university entry

When applying to a competitive university and especially for a very competitive course at a competitive university, it is important that you consider all the aspects of the entry requirements, including the qualifications typically taken before you are 16 .

## General entrance requirements

Universities may ask for a specific number of GCSEs (or their equivalent). For example, a number of medical courses ask for five (sometimes more) $\mathrm{A}^{*}$ grades.

GCSE English or another standard level equivalent is very often required at grade C at least. At many universities, this is a universal entry requirement for any course. Mathematics is also often required at grade C at least.

Currently University College London (UCL) is the only Russell Group institution to require a Modern Foreign Language GCSE at grade C or above for all of its programmes. However, if you did not take a Modern Foreign Language GCSE, or if you got a D grade or below, you can still apply to any UCL degree programme, and it won't negatively affect your application. You will not be rejected just because you don't have it but you will need to complete a short course certificate in a Modern Foreign Language or undertake a half course unit during your studies at UCL.
Please see http://www.ucl.ac.uk/prospective-students/ undergraduate/application for more details.

Although only UCL has a formal requirement in place, Modern Foreign Language qualifications are valued by admissions tutors across the Russell Group.
Some degree courses have grade requirements for particular subjects at GCSE. For many courses a B grade at least in GCSE Mathematics is needed with science and engineering courses in particular often specifying this.
Equally, courses such as Business and Psychology, which may attract applicants who aren't necessarily strong mathematicians, can ask for a B grade in GCSE Mathematics and, in some cases, sciences.

A number of institutions ask that grades and number of subjects are achieved at one sitting. Some do not accept 're-sits' at GCSE or standard level qualifications. If you think this might affect you and a university's published admissions policy is not clear, it is sensible to check with Admissions staff before applying.

## ATTENTION!

Achieving a qualification a year early will not give you an advantage if it results in you achieving a lower grade. Similarly, studying for more GCSEs at the expense of getting high grades in a smaller number is not advantageous.

## Changes to GCSEs

GCSEs in England are going through a process of reform. A number of revised GCSEs were brought it in 2015 and 2016 with further subjects to be phased-in from 2017. Instead of the previous A*-G system, the new GCSEs will be graded 9-1, with 9 being the highest grade.
The old and the new grading systems are not directly comparable which means that universities are working to review their GCSE requirements under the new system. For example a C grade can be aligned with both a 4 and a 5 and equivalencies will vary from one university to another.

Students in Wales and Northern Ireland will continue to undertake GCSEs graded $A^{*}-G$, so universities and colleges will display GCSEs both alphabetically and numerically. However, universities and colleges will be clear about their criteria in their entry requirements.

You should always check individual university websites for more detail on their grade requirements for GCSEs.
There is more information on qualification reform on the UCAS website: https://www.ucas.com/advisers/guides-and-resources/ qualification-reform

## The English Baccalaureate

The English Baccalaureate was introduced as a performance measure for schools in England in the 2010 performance tables. It is not a qualification. The measure recognises where pupils have achieved a C grade or better at GCSE in English, Mathematics, History or Geography, two sciences and a Modern or Ancient Language. From 2014 Computer Science has been included as a science option in the English Baccalaureate performance measure.

As this document demonstrates, the English Baccalaureate includes academic subjects highly valued by the Russell Group, but it is not currently required for entry to any Russell Group university. As mentioned above, most universities require English and Maths. A few may also require a Modern Foreign Language. Successful applicants are
normally expected to have achieved good grades in a range of subjects at GCSE or equivalent, and to meet any specific requirements for their chosen course.

## Curriculum for Excellence

If you are a student in Scotland, your learner journey may bypass National 5 qualifications. If this is the case a university may require that National 5 requirements qualifications are met at Higher or Advanced Higher level instead. You should check with individual universities for more information.

## Requirements for specific subjects

The GCSE or other standard level entrance requirements for individual degree courses are quite varied. In some cases, a particular subject or grade is required at standard level if it isn't being offered at advanced level. The summary below gives an idea of some of the GCSE requirements that you might come across for certain degree courses. Remember that these are only examples and requirements can differ from one university to another. It's important to check university websites for detailed requirements before applying.

- Applicants to study Medicine, Dentistry and Veterinary Science are usually required to have very good GCSE results in Maths, Science and English.
- Applicants to study Teacher Training are required to have a minimum grade C in GCSE Maths, Science and English. Some universities may ask for a minimum of grade B.
- For a degree in English, universities often look for applicants to have a GCSE in a modern or classical language.
- For a Business degree, sometimes a grade A, or more often at least a grade B, in GCSE Maths is required.
- A grade B in Maths is often required for a degree in Psychology, and a grade B in Science may sometimes be required.
- To study a science subject at university (including Biology, Chemistry or Physics) applicants who are not offering Maths at advanced level will often need to have achieved a minimum of a grade C in Maths at GCSE.


## Making your post-16 subject choices



## If I know what I would like to study at university, what subjects do I need to take at advanced level?

## Subject requirements

If you know what you wish to study at university and want to know what subjects you will need to have studied in preparation, you will find detailed information on each university's entry requirements on university websites and on the UCAS website. This section will give you some idea of general patterns.

Some degrees will be open to you whatever subjects you choose to study for your advanced level qualifications or at Higher Level (for IB or Scottish students). Just try to make sure that you stick to the $m$ five-point plan on page 56.

Also some courses will be happy with a subject at a lower level (for example, at AS-level instead of A-level or at Standard Level rather than Higher Level in the IB). This will be something to check before you apply
Some popular degrees will normally be open to you without any specific subject background. Examples include:

Accountancy, Anthropology, Archaeology, Business Studies, History of Art, Law, Management Studies, Media Studies, Philosophy, Politics, Psychology, Religious Studies/Theology, Sociology, Surveying.

## ATTENTION!

Although they may not be specified as required subjects, many successful applicants to the above courses do have advanced level qualifications in at least two of the facilitating subjects (see below). Some of these courses may still have a preference for some of the facilitating subjects and one or two universities may be more prescriptive in their subject requirements - check the Entry Profiles on UCAS Course Search

For a general guide as to the likely requirements for different degree courses, you can refer to $m$ subjects required for different degree courses.

## Which subjects can give me the most options?

Many courses at university level build on knowledge and skills which you will gain while still at school. Where this is the case, universities need to make sure that all the students they admit have prepared themselves in the best way to cope with their chosen course. For this reason, some university courses may require you to have studied a specific subject prior to entry, others may not. However, there are some subjects that are required more often than others. These subjects are sometimes referred to as facilitating subjects.

Subjects that can be viewed as facilitating subjects are:

- Mathematics and Further Mathematics
- English Literature
- Physics
- Biology
- Chemistry
- Geography
- History
- Languages (Classical and Modern)

You don't necessarily need to have studied three facilitating subjects at A-level. Some courses require one or two facilitating subjects, whilst for other courses there are no specific subject requirements. If you don't know what you want to study then it's a really good rule of thumb that taking two facilitating subjects will keep a wide range of degree courses open to you.

There are some advanced level subjects which provide suitable preparation for entry to university generally, but which we do not include within the facilitating subjects, because there are relatively few degree programmes where an advanced level qualification in these subjects would be a requirement for entry. Examples of such subjects include Economics, Religious Studies and Welsh. Advanced-level Welsh has separate curricula for first- and second-language Welsh speakers. The former develops literary and linguistic skills equivalent to those in advanced-level English; the latter develops skills equivalent to those in Modern Languages. Both routes are suitable preparation for university study in Wales and elsewhere in the United Kingdom.

There are more examples of subjects which are considered useful for certain degrees in the $\Rightarrow$ subjects required for different degree courses section of this guide.

## ATTENTION!

If you wish to study Music or Art at university, advanced level qualifications in Music or Art are usually required.

You will probably have many other subjects open to you at advanced level but, unlike the facilitating subjects listed above, they are unlikely to be required for any particular degree course and so choosing them doesn't increase your options at university.

By choosing facilitating subjects at advanced level, you will have a much wider range of options open to you at university. An advanced level qualification in any facilitating subject will keep open to you a number of degree courses. At some universities, a qualification in the subject is a requirement for entry to the course. At other universities, it may not be a requirement for the course, but will still be useful to gain entry.

Of course, by choosing facilitating subjects you are not restricted to applying for degree courses which require those subjects. For example, even if you study three facilitating subjects at advanced level, you would still be able to apply to study Law at university (for which most universities do not require any specific advanced level subjects). So, by choosing facilitating subjects you are keeping open as many options as possible.
For information about the different degree courses open to applicants with each of the facilitating subjects listed above, you can refer to the UCAS website and university websites. For some of the most popular degree courses, you can also refer to the $\#$ subjects required for different degree courses.

## Do I need to study three facilitating subjects at A-level to go to a Russell Group university?

It really depends what you want to study at university. In most cases, three facilitating subjects are not required for entry to a degree at a Russell Group university - but many courses do require you to have studied one or more facilitating subjects. That's why we recommend you choose these subjects at advanced level, when you probably aren't yet $100 \%$ sure what you'll want to study at university, and therefore which subjects will be required.

Some Medicine and other science courses, for example, may require three specific subjects.
Others, like Engineering and some other science courses, may need more than one facilitating subject. If you want to study a joint honours degree such as French and History, or Maths and Geography, you may need both subjects. But for some degrees only one facilitating subject is required and there are also courses with no specific requirements or where subjects are desirable but not an absolute requirement.

If you know what you want to study then check the entrance requirements.

However, if you're not certain about what degree you want to do then facilitating subjects will keep your options open. Put simply, the more you do the more courses will be available to you.
If you take three facilitating subjects, you'll have the largest number of degree courses to choose from further down the line - all the courses which require one or more of your subjects as well as those which have no specific subject requirements. Taking two facilitating subjects will also keep a wide range of degree courses and career options open to you.
If you are considering choosing subjects which are not facilitating subjects, bear in mind that not all advanced level subjects are considered by every selective university to be good preparation for their courses (see below).


## ATTENTION!

If you decide not to choose one or more of the facilitating subjects at advanced level, many degrees at competitive universities will not be open to you

## What if the facilitating subjects don't appeal to me?

If you are thinking of taking more than two subjects which are not - facilitating subjects please do consider the following:

- In many countries all 16- and 17-year olds have to study Mathematics, their home language, a science and a foreign language.
- Have you considered why you do not wish to study a facilitating subject? Are you looking for a change? Or are you trying to avoid a challenge? In other words, have you thought your decision through carefully?
- The jump between standard and advanced level qualifications can be demanding, even in subjects that you have studied before. If you are starting a particular subject from scratch, you are taking a risk that you won't enjoy the subject, or will find it particularly difficult. Take more than one new subject and you multiply the risk.
- Many specialist courses at advanced level take the majority of their course content from $\leadsto$ facilitating subjects (for example, Sports Studies is based heavily on Biology). If you choose to study the facilitating subject rather than the specialist subject you will still learn the specialist information but you will also gain greater flexibility in your university choices.


## Are there subjects that universities don't accept?

Critical Thinking, Citizenship Studies and General Studies are usually better taken only as an 'extra', rather than as one of the advanced level subjects on which your university application will be relying.

Some universities publish lists of non-preferred subjects, or subjects that are only suitable if taken in combination with others.

One of the best ways to keep your options at university open is to choose your advanced level subjects from the list of $₫$ facilitating subjects. If you are not sure of what to study at university, why not think about your two favourite subjects from the facilitating subjects list? The section on $\rightsquigarrow$ which subjects can give me the most options? may help you choose.

## How do certain subject combinations relate to university courses?

If you know what degree subject you would like to study you should check our guidance on subjects required for different degree courses.

If you are not sure what degree subject you might be qualified for, $t$ is a good idea to consider the broad ways in which certain subject combinations at advanced level tend to relate to broad groups of university degree courses.

For those studying for AS and A-levels, the most common patterns are described in detail below. The issues for students studying for an IB or for Highers are similar but the structure of these qualifications means that there is less pressure to focus on a relatively narrow range of subjects.

This doesn't provide an exhaustive list of all the degree options which are open to you but should give you an idea of the degrees which students with certain A-level combinations most commonly enter.

You should be aware that some courses at some universities may view certain combinations of subjects as "narrow". For example some courses may not accept two similar A-levels as part of a three subject mix. Therefore you should check university entrance requirements carefully.

## The scientist

Typical A-levels include: Chemistry, Biology, Physics, Mathematics, Further Maths
Possible degree options include: Sciences, Mathematics, Engineering
For the sake of maintaining a wider outlook on life, many students in this category will replace one of the sciences with an arts/humanities subject or a social science (indeed, some universities encourage this). So, often the choice will look more like this: Chemistry, Mathematics, Physics with an arts/social science/humanity/creative subject as an AS/IB standard level subject or to broaden the range of subjects studied.
The person who made this choice, however, would have to look at the implications of not doing Biology AS- (or equivalent). When considering such implications, it is worth noting that, in the science field at university, many degrees fall into one of two camps: Biological/Life Sciences and Physical Sciences. More guidance is given below.

Students who are very good at maths may well do Further Mathematics (this is often now done in the same option block as Mathematics).


## ATTENTION!

Some Maths courses may require both Maths and Further Maths.
But for some other degree courses, such as Medicine, some universities will not consider both Maths and Further Maths as part of a three subject combination. Check entry requirements carefully.

## Biological/Life Sciences

## Typical A-levels include: Chemistry, Biology

## Possible degree options include: Biological/Life Sciences

Students who take Chemistry and Biology have access to a huge range of degrees, including those leading to a definite career path (for example, Medicine, Dentistry, Veterinary Science, Pharmacy, Dietetics) and those based on research (for example, Biochemistry, Biomedical Materials Science, Pharmacology).

## Physical Sciences

Typical A-levels include: Mathematics, Physics, another science subject Possible degree options include: Engineering (mechanical, electronic/ electrical and civil), Physics, Materials Science
Physical Sciences degrees involve the practical application of Mathematics and Physics
If you are a very talented scientist/mathematician, it is important that out of the four available sciences - Biology, Chemistry, Maths (which includes both Mathematics and Further Mathematics) and Physics - you should choose three.

## ATTENTION!

If you are applying with a science A-level some universities will require a 'pass' in the practical as well as setting an overall grade requirement. You should check individual university websites for guidance.

## Essays, essays, essays

Typical A-levels include: mainly arts/humanities and social sciences Possible degree options include: a wide range of arts/humanities, social sciences and business degrees

Let's imagine that you do History, English Literature, Politics and Sociology at advanced level. Your degree at university might well follow on from one of these subjects - you could do a degree in History, Politics, English Literature or Sociology.

You could also do a degree in another arts/humanities subject (for example, Philosophy). Or you could do a degree in another social science (for example, Psychology). Or you could do a degree in something more vocational (for example, Law or Management Sciences) - there are many options open to you.

## The linguist

## Typical A-levels include: a language

Possible degree options include: a wide range of language degrees
There are many language degrees open to students who have studied one language at advanced level. Some universities offer courses where you can begin a language from scratch.

Some students will emphasise their linguistic abilities by doing not one but two foreign languages. Students that study languages are highly sought after by universities for language degrees or courses with a language component.

## The artist

Typical A-levels include: creative subjects e.g. music, art or drama Possible degree options include: degrees relating to those A-level subjects
If you have talent in music you may well want to study it at university. If so, it is important that you take Music to advanced level (along with performance grades).

Music Technology A-level may not be considered suitable for Music degrees, so it's important to check whether this will meet the requirements of the courses and institutions you are interested in.

If you have a talent in art you may well be thinking about an art foundation course as a precursor to a degree programme. You might want to consider an advanced level qualification in either Art or Art and Design. Either of these will provide you with the basis for your portfolio, which you will need to gain entry to an art foundation course.
For Drama, many universities don't require you to have specific subjects at advanced level. However, some do have subject specific entry requirements so do check carefully. In addition, some universities may ask you to attend an audition/workshop/interview. Preparation for such auditions can be gained from many different out-of-school activities, from drama and dance groups within school and, of course, from your school leaving qualifications themselves.

## Choices for entry to universities in Scotland

Scotland has two Russell Group institutions: the University of Edinburgh and the University of Glasgow.

Scottish degrees traditionally take four years of study. This differs from elsewhere in the UK, but is a long-established model. In the arts, engineering, sciences and social sciences you will typically take a broad range of subjects in your first two years before going on to specialise in your final two years.

The typical 4-year Scottish degree enables you to experience new subjects without committing long term; to discover which subjects are best suited to you and tailor your degree accordingly; and to study a breadth of subjects. In some cases, it is possible to apply for direct entry into the second year of a degree programme, meaning you can graduate with an Honours degree after three years of study. Direct-entry eligibility is normally based on high attainment in A-levels, Advanced Highers or their equivalent.

Because of this broad-based degree structure, in order to be admitted to a Scottish university, you will usually be expected to demonstrate breadth in your studies at school or college. By developing different academic skills and knowledge, you will be well prepared for universitylevel study in a range of subjects.

There are exceptions to the traditional broad-based Scottish degree Most vocational and professional courses, including Dentistry, Medicine, Veterinary Medicine and Architecture, offer only limited flexibility and opportunities for personal choice. Some professional subjects and some science degrees take more than four years to complete.

For the subjects most likely to be required for entry to a Scottish university see section $m$ If I know what I would like to study, what subjects do I need?

## Further questions?

The Russell Group website has answers to frequently-asked questions about qualifications and subject choice. You may also want to contact universities directly if you have questions about entry requirements for particular degree courses - some useful contacts are on pages 61-63.

## Subjects required for different degree courses



You will see below the advanced level subjects which are most commonly essential requirements for different degree courses.

## ATTENTION!

If you know you want to apply for a certain degree, you must take these essential subjects at advanced level. To maximise your chances of gaining a place at a competitive university, you would also be wise to choose one or more of the other useful subjects for the degree in question.

If you are not sure what you want to study at university, choosing facilitating subjects will keep your options open. These are the subjects which are most often required for entry to selective universities. They are:

- Mathematics and Further Mathematics
- English Literature
- Physics
- Biology
- Chemistry
- Geography
- History
- Languages (Classical or Modern)

See page 29-32 for more guidance on $\Perp$ facilitating subjects
You should be aware that some courses at some universities may view certain combinations of subjects as "narrow". For example some courses may not accept two similar A-levels as part of a three subject mix.
Therefore you should check university entrance requirements carefully.

Please note that the entrance requirements for individual universities and courses will vary and this list covers only the most popular courses Not every course is available at Russell Group universities. You are therefore advised to use this guide in conjunction with more detailed information on the UCAS website, and on university websites.

## Accountancy (also Banking/Finance/Insurance)

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Usually none, although one or two universities require Mathematics.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Mathematics, Business Studies (AGCE, National and Diploma)
and Economics.

## Actuarial Science/Studies

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Mathematics
USEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics, Economics, Business Studies
(AGCE, National and Diploma).

## Aeronautical Engineering

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Mathematics and usually Physics
USEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics, Design Technology, Computing/Computer Science.

## American Studies

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Requirements vary but English and/or History are often asked for
USEFUL ADVANCED LEVEL QUALIFICATIONS
Politics

## Anthropology

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
None
USEFUL ADVANCED LEVEL QUALIFICATIONS
A small number of courses like a science AS-level such as Biology Sociology is also very relevant.

## Archaeology

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
None
USEFUL ADVANCED LEVEL QUALIFICATIONS
Geography, History or science subjects can all be useful.

## Architecture

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Some courses say they want an arts/science mix. Some may require Art
USEFUL ADVANCED LEVEL QUALIFICATIONS
Art, Mathematics, Design Technology and Physics. AGCE or National Art and Design may also be useful at some universities. Do note that a portfolio of drawings and ideas may be asked for.

## Art and Design

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Art or Design Technology including AGCE/National (to give you the portfolio to get onto an Art Foundation Course, though sometimes AGCE/National Art and Design applicants go straight onto a degree).
uSEFUL ADVANCED LEVEL QUALIFICATIONS
Design Technology, Art \& Design. Do note that most entrants onto Art and Design degrees will have done a one-year Art Foundation Course after completing Year 13

## Biochemistry

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Always Chemistry and some universities will say you must have Biology as well, while some will say Chemistry plus one from Mathematics/
Physics/ Biology. Doing Chemistry, Biology and Mathematics or Physics will keep all Biochemistry courses open to you.

USEFUL ADVANCED LEVEL QUALIFICATIONS
Biology, Mathematics, Further Mathematics, Physics, Computing/ Computer Science

## Biology

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Biology, usually Chemistry. A few universities specify two sciences.

EFUL ADVANCED LEVEL QUALIFICATIONS
Mathematics or Physics, Computing/Computer Science.

## Biomedical Sciences (including Medical Science)

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Normally two from Biology, Chemistry, Mathematics and Physics. Chemistry is essential for some courses.

USEFUL ADVANCED LEVEL QUALIFICATIONS
Mathematics, Further Mathematics, Biology, Chemistry, Physics.

## Business Studies

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
None
USEFUL ADVANCED LEVEL QUALIFICATIONS
Mathematics, Business Studies (AGCE, National and Diploma) and Economics.

## Chemical Engineering

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Mathematics, usually Chemistry and sometimes Physics as well.

SEFULADVANCED LEVEL QUALIFICATIONS
Physics, Biology, Further Mathematics, Computing/Computer Science

## Chemistry

SSENTIAL ADVANCED LEVEL QUALIFICATIONS
Chemistry and occasionally Mathematics. Most courses require Chemistry and would like Mathematics and one other science subject (for example, Physics or Biology).

USEFUL ADVANCED LEVEL QUALIFICATIONS
Mathematics, Further Mathematics, Physics, Biology, Computing/ Computer Science.

## Childhood Studies

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
None
USEFUL ADVANCED LEVEL QUALIFICATIONS
CACHE, Psychology, Sociology, AGCE/National/Diploma Health and Social Care.

## Civil Engineering

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Mathematics, in many cases Physics. Sometimes one of Physics or Chemistry.

USEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics, Chemistry, Biology, Computing/Computer Science,
Design Technology, Geography.

## Classical Studies

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
For Classics courses Latin or Ancient Greek are required.
For Classical Studies and Classical Civilisation courses most
subjects will be considered.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Modern Foreign Language, English Literature, History,
Classical Civilisation. Do note that there are some Classics courses which will allow you to start Latin and/or Classical Greek from scratch.

## Computer Science

SSENTIAL ADVANCED LEVEL QUALIFICATIONS
For some courses, Mathematics. For some courses Computing/
Computer Science.
SEFUL ADVANCED LEVEL QUALIFICATIONS
Mathematics, Further Mathematics, Computing/Computer Science,
Physics, Philosophy, ICT.

## Dentistry

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Chemistry and Biology for most courses, but some require Mathematics or Physics as well.

SEFUL ADVANCED LEVEL QUALIFICATIONS
Mathematics, Physics, Further Mathematics.

## Dietetics

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS Chemistry, Biology.

USEFUL ADVANCED LEVEL QUALIFICATIONS
Mathematics

## Drama

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Some courses require English Literature and for a few courses English and/or Theatre Studies.

USEFUL ADVANCED LEVEL QUALIFICATIONS
English Literature, English Literature and Language, Theatre Studies.

## Economics

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Usually Mathematics.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Economics, Computing/Computer Science, History, Business Studies.

## Education

$\rightarrow$ See Teacher Training

## Electrical/Electronic Engineering

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Mathematics, usually Physics
USEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics, ICT, Design Technology, Computing/ Computer Science.

## Engineering (General)

SSENTIAL ADVANCED LEVEL QUALIFICATIONS
Mathematics and Physics.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics, Design Technology, Computing/
Computer Science

## English

SSENTIAL ADVANCED LEVEL QUALIFICATIONS
English Literature or combined English Language \& Literature (some courses will accept English Language)

USEFUL ADVANCED LEVEL QUALIFICATIONS
History, Religious Studies, a foreign language.

## Environmental Science/Studies

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Many courses will ask for two from Biology, Chemistry, Mathematics, Physics and Geography.

USEFUL ADVANCED LEVEL QUALIFICATIONS
Another facilitating subject, particularly a science.

## uropean Studies

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
A Modern Foreign Language.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Another Modern Foreign Language, English Literature, History, Politics.

## French

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
French
USEFUL ADVANCED LEVEL QUALIFICATIONS
Another Modern Foreign Language, English Literature, History, Politics.

## Geography

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Most degrees require Geography
USEFUL ADVANCED LEVEL QUALIFICATIONS
Some Geography BSc (science) degrees prefer one from Biology,
Chemistry, Mathematics or Physics

## Geology/Earth Sciences

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Usually two from Mathematics, Physics, Chemistry and Biology.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Geography, Geology, Computing/Computer Science.

## German

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
German (a handful of universities offer the opportunity to study German from scratch, without German A-level).

USEFUL ADVANCED LEVEL QUALIFICATIONS
Another Modern Foreign Language, English Literature, History, Politics.

## History

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Most degrees require History.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Economics, English Literature, Philosophy, Politics, Sociology,
Theology/Religious Studies, a modern or classical language.

## History of Art

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
None

USEFUL ADVANCED LEVEL QUALIFICATIONS
Art, English Literature, History, Theology/Religious Studies, History of Art, French, German, Spanish, Italian.

## Italian

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Italian or another language such as French, German or Spanish.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Another Modern Foreign Language, English Literature, History, Politics.

## Law

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Usually none, although a few universities require English.
USEFUL ADVANCED LEVEL QUALIFICATIONS
History; other facilitating subjects.

There really are no essential subjects for Law. Maybe one choice should involve $\#$ essay or report writing. History gives you good relevant skills for Law but is not essential.

## Management Studies

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Sometimes Mathematics
USEFUL ADVANCED LEVEL QUALIFICATIONS
Mathematics, Economics, Business Studies (AGCE, National and Diploma)

## Materials Science (including Biomedical Materials Science)

SSENTIAL ADVANCED LEVEL QUALIFICATIONS
Normally two from Chemistry, Mathematics, Physics, Biology
(also Design Technology for some universities).
USEFUL ADVANCED LEVEL QUALIFICATIONS
Chemistry, Design and Technology, Further Mathematics, Computing/ Computer Science

## Mathematics

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Mathematics and sometimes Further Mathematics.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics, Physics, Computing/Computer Science.

## Mechanical Engineering

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Mathematics, usually Physics
SEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics, Design Technology, Computing/Computer Science.
Mechanical Engineering departments may have a preference for
Mathematics A-levels with a strong mechanics component.

## Media Studies (including Communication Studies)

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
A few courses ask for English or Media Studies.
useful advanced level qualifications
English, Media Studies, Sociology, Psychology.

## Medicine

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
If you do Chemistry, Biology and one from Mathematics or Physics you will keep all the medical schools open to you. If you do Chemistry and Biology you will keep open the vast majority. If you do Chemistry and one from Mathematics and Physics you will limit your range of choices much more.

USEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics or a contrasting (non-science) subject, Computing/ Computer Science.

## Music

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
For most traditional courses, Music and Grade VII/VIII, although some universities will consider candidates without A-level Music.

USEFUL ADVANCED LEVEL QUALIFICATIONS
Some universities have a preference for at least one - essay-based subject

## Nursing and Midwifery

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Usually Biology or another science.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Biology, CACHE, Sociology, Psychology, Chemistry,
Mathematics, Physics.

## Occupational Therapy

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Some courses ask for Biology.
uSEFUL ADVANCED LEVEL QUALIFICATIONS
Psychology, Physical Education, Sociology or another science.

## Optometry (Opthalmic Optics)

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Two from Biology, Chemistry, Mathematics or Physics
(some courses prefer Biology as one of the choices).
USEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics, Computing/Computer Science.

## Orthoptics

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Biology
uSEFUL ADVANCED LEVEL QUALIFICATIONS
Chemistry, Mathematics, Physics, Computing/Computer Science.

## Philosophy

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
None
useful advanced level qualifications
Mathematics, Classical Civilisations, Philosophy and Religious
Studies/Theology.

## Physics

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Mathematics, Physics.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics, Chemistry, Computing/Computer Science.

## Physiotherapy

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Most courses will consider you with just Biology. However, some also require a second science from Chemistry, Mathematics or Physics.

USEFUL ADVANCED LEVEL QUALIFICATIONS
Chemistry, Mathematics, Physics, Psychology.

## Planning

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Sometimes Geography.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Geography, Mathematics, Economics

## Politics

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Usually none
JSEFUL ADVANCED LEVEL QUALIFICATIONS
Politics, History, Philosophy, Law, Sociology, Economics, English Literature, Religious Studies, Business Studies.

## Psychology

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
A few courses ask for one from Biology, Chemistry, Mathematics, Physics.
USEFUL ADVANCED LEVEL QUALIFICATIONS
Biology, Mathematics, Psychology, Sociology, Computing/
Computer Science.

## Religious Studies/Theology

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
None

USEFUL ADVANCED LEVEL QUALIFICATIONS
Religious Studies/Theology, Philosophy, English Literature, History

## Sociology

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
None
USEFUL ADVANCED LEVEL QUALIFICATIONS
Sociology, Psychology, Geography, Computing/Computer Science.

## Spanish

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Spanish (some degrees will also consider French, German or Italian).
USEFUL ADVANCED LEVEL QUALIFICATIONS
Another Modern Foreign Language, English Literature, History, Politics.

## Speech Therapy

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
Some universities want a science such as Biology, Chemistry or Physics. Some specify Biology, but some degrees will consider candidates with none of these.

USEFUL ADVANCED LEVEL QUALIFICATIONS
A modern foreign language (for example, French, German, Spanish, Italian), English Language (and Literature), Psychology.

## Sports Science/Physical Education

SSENTIAL ADVANCED LEVEL QUALIFICATIONS
Many courses want to see one from Biology/Chemistry/Mathematics/
Physics (some courses will treat Physical Education as a science equivalent).
useful advanced level qualifications
Physical Education, Psychology.

## Surveying

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
None
USEFUL ADVANCED LEVEL QUALIFICATIONS
For some types of Surveying e.g. Building Surveying, Mathematics and Physics could be helpful. For Estate Management (General Practice Surveying) most A-level combinations will be considered.

## Teacher Training (Primary and/or Secondary)

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
At least one from Art, Biology, CACHE, Chemistry, Computing, Design and Technology, Drama (Theatre Studies), English, French, Geography, German, History, ICT, Italian, Mathematics, Music, Physics, Physical Education, Religious Studies (Theology), Spanish.

CACHE meets the entry requirements for early years Primary Teaching and a large number of Primary Education Teacher Training Degrees.

USEFUL ADVANCED LEVEL QUALIFICATIONS
Another of the subjects listed above.

## Veterinary Science

ESSENTIAL ADVANCED LEVEL QUALIFICATIONS
You should do Chemistry and Biology and one from Mathematics/ Physics so that you have all universities open to you.

USEFUL ADVANCED LEVEL QUALIFICATIONS
Further Mathematics

## How subject choices can affect your future career options



In the 1960s, 70s and 80s graduates represented only a very small percentage of the school-leaving population: $8 \%$. Now it is more than $40 \%$. Being a graduate no longer makes you part of a small elite and taking advanced level qualifications is now very common. You now need to think about what sort of graduate you may become.

There are now five major types of graduate occupation: ${ }^{1}$

## - Traditional graduate occupations

There are established professions for which, historically, the normal entry route has been via an undergraduate degree programme. Examples are Barristers, Doctors, Engineers, Higher Education and Secondary Education Teachers, and Research Scientists.

- Modern graduate occupations

The newer professions, particularly in management, IT and creative vocational careers, are areas which graduates have been entering since educational expansion in the 1960s. Examples are Accountants, Computer Programmers, Primary School Teachers, and Journalists.

- New graduate occupations

There are areas of employment, many in new or expanding occupations, where the route into the professional area has recently changed such that it is now via an undergraduate degree programme. Examples are Marketing Managers, Physiotherapists, Nursing, and Computer Games Designers.

## - Niche graduate occupations

There are occupations where the majority of incumbents are not graduates, but within which there are stable or growing specialist niches which require higher level skills and knowledge. Examples are Leisure Centre Managers, Hotel Managers, and Retail Managers.

- Non-graduate occupations

Non-graduate occupations are those for which a degree is not generally required. However, it may still be appropriate for graduates to enter these jobs.

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## ATTENTION!

While you may be aware of the subject requirements of a well known career such as Medicine, other career-related requirements may be less well-known. Did you know, for example, that some of the new graduate occupations such as Computer Games Design can prefer a facilitating subject such as Maths, as well as a Design subject?

If you have some career ideas already, you should check entry requirements in related degree subjects on the UCAS website in the Course Search section. See also the Best Course 4 Me website for advice on careers and university courses.

## Professional careers

As explained above, a wide range of graduate occupations are in professional areas.
A profession is a job or an occupation that requires a certain level of specialist training. People working in each profession (called professionals) are required to demonstrate expertise and specialised knowledge, as well as ethical behaviour. Professions are almost always regulated in some way, either by law or through membership of a professional body. Professions offer some of the highest graduate earnings, as well as the opportunity to enjoy a challenging career in an area where you'll become a recognised expert.
Some of the most well-known professionals are doctors, solicitors and accountants but in fact there are several hundred different professions covering a huge range of sectors including building, engineering, business, education, technology, hospitality, sciences, the environment, finance, research, information, health, and culture.
If you already have some idea of the business or industrial sector you want to go into, you are advised to explore the options it offers for a professional career. If you want to enter a profession this may influence your choice of degree course, and possibly also your choice of advanced level qualifications.
For example, if you are interested in engineering, you could learn more about the many different disciplines within engineering, the various routes into the engineering profession, and the academic and professional qualifications you will need to achieve in order to become a practising engineer.

For many professionals, a university degree is the first step towards entering their chosen profession. In terms of qualifying as a professional, there are often advantages to doing a degree course which is accredited or certified by the relevant professional body. Some accredited programmes provide a recognised fast-track route to professional status, whilst others offer exemptions from certain professional examinations.


## ATTENTION!

Not all degree courses are accredited by the relevant professional body. If you are hoping to do a degree leading to a professional qualification you are advised to check with the university or with the professional body itself to see which courses have the necessary accreditation from the professional body.

If you are hoping to enter a profession, you are should try to ensure that your choices for post-16 education will give you the best possible preparation for the degree and professional qualifications you will need for your chosen career.

More information about professional careers and training can be found on the following websites.
Total Professions www.totalprofessions.com/home
Careers Service Northern Ireland
www.nidirect.gov.uk/index/informationand-services/education-andlearning/careers.htm

Skills Development Scotland www.myworldofwork.co.uk/
Careers Wales www.careerswales.com

## The five-point plan for making your post-16 choices

## Abbreviations

Applied General Certificate of Education (Double award)
BTEC Business and Technician Education Council (merged into Edexcel in 1996)
CACHE Council for Awards in Care, Health and Education
EPQ Extended Project Qualification
GCSE General Certificate of Secondary Education
IB International Baccalaureate Information and Communication Technologies International General Certificate of Secondary Education

IT Information Technology
NVQ National Vocational Qualification
OCR Oxford Cambridge and RSA Examinations
S4 Fourth year of secondary school (Scotland)
S5 Fifth year of secondary school (Scotland)
S6
UCAS Universities \& Colleges Admissions Service
VCE

Vocational Certificate of Education

## Links

## Student Finance in England

www.gov.uk/student-finance

## Student Finance NI

www.studentfinanceni.co.uk

## Student Finance Wales

http://www.studentfinancewales.co.uk

## Total Professions

www.totalprofessions.com

## UCAS

www.ucas.com

## Useful contact details

## University of Birmingham

admissions@bham.ac.uk
www.birmingham.ac.uk/undergraduate/index.aspx

## University of Bristol

ug-admissions@bristol.ac.uk
www.bristol.ac.uk/study

## University of Cambridge

admissions@cam.ac.uk
www.undergraduate.study.cam.ac.uk

## University of Cardiff

www.cardiff.ac.uk/for/prospective/undergraduate/questions/contact-
us.html
www.cardiff.ac.uk/for/prospective/undergraduate

## University of Edinburgh

www.ed.ac.uk/studying/undergraduate/contacts
www.ed.ac.uk/studying/undergraduate

## University of Exeter

ug-ad@exeter.ac.uk
www.exeter.ac.uk/undergraduate/applications

## University of Glasgow

student.recruitment@glasgow.ac.uk
www.gla.ac.uk/undergraduate/degrees

## mperial College London

www3.imperial.ac.uk/registry/admissions

## King's College London

www.kcl.ac.uk/study/ug/contacts.aspx\#admissions
www.kcl.ac.uk/study/ug/admissions/index.aspx
prospective@kcl.ac.uk

## University of Leeds

study@leeds.ac.uk
www.leeds.ac.uk/info/20011/undergraduate

## University of Liverpool

http://ask.liv.ac.uk
www.liv.ac.uk/study/undergraduate

## London School of Economics and Political Science

ug.admissions@lse.ac.uk
www.Ise.ac.uk/study/undergraduate/undergraduateHome.aspx

## University of Manchester

www.manchester.ac.uk/study/undergraduate/contact-us www.manchester.ac.uk/study/undergraduate

## Newcastle University

www.ncl.ac.uk/undergraduate/contact
www.ncl.ac.uk/undergraduate/apply

## University of Nottingham

undergraduate-enquiries@nottingham.ac.uk
www.nottingham.ac.uk/ugstudy

## University of Oxford

www.ox.ac.uk/study study@ox.ac.uk

## Queen Mary University of London

admissions@qmul.ac.uk
www.qmul.ac.uk/undergraduate

## Queen's University Belfas

admissions@qub.ac.uk
http://www.qub.ac.uk/Study/Undergraduate

## University of Sheffield

www.sheffield.ac.uk/contact/prospective
www.sheffield.ac.uk/undergraduate

## University of Southampton

admissions@southampton.ac.uk
www.southampton.ac.uk

## University College London

study@ucl.ac.uk
www.ucl.ac.uk/prospective-students

## University of Warwick

ugadmissions@warwick.ac.uk
www2.warwick.ac.uk/study/undergraduate

## University of York

ug-admissions@york.ac.uk
www.york.ac.uk/study/undergraduate

## The Russell Group

www.russellgroup.ac.uk
enquiries@russellgroup.ac.uk
@RussellGroup
02038161300
Please note that we cannot offer individual advice on GCSE, A-level or degree course subject choice

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## RUSSELL

University of Birmingham
University of Bristol
University of Cambridge
Cardiff University
Durham University
University of Edinburgh
University of Exeter
University of Glasgow
Imperial College London
King's College London
University of Leeds
University of Liverpool
London School of Economics
and Political Science
University of Manchester
Newcastle University
University of Nottingham
University of Oxford
Queen Mary University of London
Queen's University Belfast
University of Sheffield
University of Southampton
University College London
University of Warwick
University of York


[^0]:    1 Elias, P, and Purcell, K. Researching Graduate Careers Seven Years On, Research Paper No. 6, SOC (HE): A classification of occupations for studying the graduate labour market, March 2004

