Subject Choice Guidelines

When choosing from the list of subject options, it is important to remember that the Leaving Certificate is a general education, and the desirability of a balanced education cannot be overstressed. It is important to remember that most people will change their careers several times in the course of their working lives. Therefore, a future career should not be the only determining factor in deciding what subjects to choose.
Many factors have to be taken into account when deciding what subjects to take.
These factors include:

(i) The student's interest in or liking for a subject.
(ii) His aptitude towards a subject.
(iii) The value of a subject for his own personal development.
(iv) Whether or not it is necessary to keep options open.
(v) The relevance of a subject for a particular career.
(vi) If a subject is an *essential* requirement for courses at third level.
(vii) If a subject will be *useful* for a particular course.

Most students take seven subjects at Leaving Certificate level. As this normally includes, Irish, English, Mathematics and a language, this leaves three more to be chosen.

Minimum Requirements

Generally, as most students will do Irish, English, Mathematics, and a third language this will cover the general entry requirements for N.U.I colleges. However, there are exceptions. T.C.D. only require English, Maths, and Irish or a third language, Most of the I.T's require Irish or English, and Maths. Some engineering and science courses do not require a third language. However, some courses have additional requirements. For example, all engineering courses in T.C.D. and U.C.D. require HC3 in honours Maths. Honours Irish is a requirement for primary teaching. Chemistry is a requirement for Veterinary in U.C.D., Human Nutrition & Dietetics in D.I.T., Pharmacy in T.C.D., Medicine and Dentistry in U.C.C. Physics is a requirement for Theoretical Physics in U.C.D. and T.C.D. One laboratory science (Chemistry/Biology/Physics) is required for many science courses. Architecture in D.I.T. requires the candidates to sit an aptitude test and attend an interview. Two science subjects are required for Physiotherapy and Human Genetics in T.C.D. Commerce in U.C.D. requires a HD3 or OB3 in Maths. Most U.C.D. courses require 2HC3 and 4OD3 while most T.C.D. courses require 3HC3 and 3OD3. Other courses require a portfolio and/or aptitude test and/or an interview. The third level institutes adhere to a two-year rule as regards essential subjects and grades, so there is no possibility that any new requirements will be added once a student has started the two-year leaving cycle. In addition, the Defence Forces require a C3 in three honours subjects and three D3 in ordinary level subjects. These must include Maths, Irish, English, and a third language. An Garda Síochána requires an OD3 in Maths, and OD3 in two languages which must include Irish *or* English, plus two other subjects. These examples illustrate how complicated this process is, therefore it is vital to check the complete list in the ***Directory Of Leaving Certificate Entry Requirements*** or ***www.qualifax.ie***.

The "Easy" Subjects

There is no such thing as an easy subject. There are statistics that show some subjects obtain a higher number of A's than others. This however, is a reflection on the type of candidate that selects these subjects. For example, Applied Maths has a large number of A's. This does not mean it is an easy subject, rather it reflects the fact that these students probably do, and have an aptitude for, Honour Maths and Physics.

However, the question still needs to be asked as to why students think that for example, Biology is the easiest science and Business is easier than Economics or Accounting? This is definitely is not the case. The grades obtained in the Leaving Certificate results in Biology are not better than those in Chemistry or Physics and the grades in Business are not better than those in Economics or Accounting.

Subject	**2009 (≈ 52, 000 Candidates)**				**2008 (≈ 50,000 Candidates)**		
Honours	**Candidates**	**A's**	**B's**		**Candidates**	**A's**	**B's**
Business	12,410	11.1%	29.5%		12,154	11.6%	28.2%
Accounting	4,837	20.2%	35.1%		4,811	20.7%	31.9%
Economics	3,525	11.9%	31.1%		3,426	13.3%	31.5%
Biology	20,102	16.5%	27%		17,048	16.7%	27.2%
Chemistry	6,037	21.9%	31.6%		5,904	22.1%	28.9%
Physics	4,694	20.5%	29.1%		4,929	19.6%	27.4%
English	32,864	10.3%	27%		31,793	10.2%	27.5%
Applied Maths	1,333	23.8%	30.5%		1,288	27.2%	28.1%
History	7,853	13%	30.6%		7,601	12.1%	32.7%
Geography	19,024	9%	29.6%		18,268	8.3%	28.7%
Source www.examinations.ie							

It might be that students consider subjects like Business to be easier because a student can pick up the text book and understand a topic without much help from a teacher. This is not the case with Economics to Accounting were a teacher's assistance is needed to understand individual topics. This may also explain - to some extent - why Biology is considered to be easier than Chemistry or Physics. These points are also worth considering when, for example, the cousin or next door neighbour says "*don't do Geography because I found it hard*". It being difficult for the cousin or neighbour does not me it will be difficult for another student.

The "Wimbledon" Effect

Please be careful of the "*Wimbledon*" effect. In June, while the tennis tournament is on the television, all twelve year olds are on the street are playing tennis. Two months later the attractiveness of this sport has reverted back to its original interest level. Similarly, when the Internet took off, the interest in computers rocketed. This later died back. A student playing a computer game all day does not mean he is good at computers and therefore suited to studying computers at third level. Similarly, when the economy is in the news the demand to study economics increases but when it is not in the news the interest levels are lower. This poor decision making process is also seen when students select a computer course on the C.A.O. form. This should not be done on the basis of a student spending hours on Facebook or playing computer games , but rather because he, for example, has built his own computer, double the memory on the hard drive, or built a website.

Mathematics

While honours maths is a requirement for a number of courses, e.g. engineering, the *need* to have maths at honours level does not make a student *able* to cope with honours maths. It is our experience that those who achieved an A or B (and sometimes those scoring a C grade) at honours Junior Certificate level should be able for honours at Leaving Certificate level – assuming the interest is there and a considerable effort is put in. This point - about *needing* to have a subject at honours level does not make a student *capable* of doing it - applies to all subjects/levels.

Honours Maths is required for all Engineering level 8 honours degrees. You can however be accepted onto a level 7 engineering ordinary degree in D.I.T. and other I.T.'s with ordinary level Maths. This level 7 degree can then be converted into a level 8 degree.

There are now 25 bonus points available to any student who sits the Honour paper and scores at least a D3. (Any grade from an A1 to a D3 receives 25 points). However, *needing* or *wanting* these bonus points does not make someone *able* to do or give them the *aptitude* to do Honours Maths.

Ordinary level Maths (D3) is an essential requirement for the vast majority of third level courses. Failing ordinary level Maths greatly restricts entry into third level. In addition certain course require a certain minimum grade in ordinary level Maths, for example Commerce in U.C.D. requires a OB3 or a HD3 Maths. Please check *Directory Of Leaving Certificate Entry Requirements*.

Restricted Courses

When checking the details of courses it should be noted that some courses are referred to as *restricted*. This means that to enter these courses the student is required to submit a portfolio and/or sit an aptitude test and/or attend an interview. These additional requirements also explain why some courses require more than 600 points. For example, Animation in the Dun Laoghaire Institute if Art, Design, and Technology requires 699 points. This consists of points from the Leaving Certificate, a portfolio, and possible an interview. In D.I.T. Architecture requires 590 points; 100 can be obtained from an aptitude test, 100 from an interview (at which it is recommended that portfolio is show) and the remainder from the Leaving Certificate. It is strongly recommended that the preparation of a portfolio should be spread over two years, i.e. 5th year and 6th year. It is not possible to prepare a portfolio in 6th year only. If necessary, a student could attend a portfolio preparation course (check N.C.A.D. & Dun Laoghaire) during the summer at the end of 4th year or end of 5th year, or at night-time during 5th year. Portfolio preparation courses can be found on Qualifax.ie using the "*all courses search*" and type in "*portfolio*".

The Number of Honours Subjects

When subjects have been decided upon it is important to count the number of ordinary level and honours subjects take. The C.A.O. system only counts the best six subjects. It is important to be conscious of the ceiling in points that can be obtained if a student is only taking four honours and three ordinary level subjects. Please check the points table in this document. However, it is worth repeating that *needing* to take an extra subject, or a subject at honours level, does not make a student *capable* of doing so.

Physics

Physics has a very strong Maths component and requires learning off many formulae. It develops students understanding of many of the ordinary things that surround us including heat, light, electricity and magnetism. It uses maths and equations to describe and predict phenomena. Physics develops an analytical way of thinking that is very useful in *all* science courses as well as computer courses. Engineering courses have a high physics component particularly electrical and electronic engineering. Some pharmaceutical course will involve the study of physics for example, radiography and physiotherapy. For more information please

(i) Reflect on your experience of this subject at Junior Certificate level
(ii) Reflect on what was taught in the 4th year module
(iii) Talk to individual subject teachers
(iv) Check www.ncca.ie and check syllabus/curriculum
(v) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(vi) Check www.examinations.ie and look at previous exam papers with a view to the level of interest in the material rather than the level of difficulty.
(vii) Talk to a 5th year student who is taking this subject
(viii) Talk to a 6th year student who if currently finishing this subject.

Chemistry

Chemistry is the study of the composition of matter and the changes they undergo. The scientific principles underpinning chemistry involve everything in everyday life, from the clothes we wear, to the food we consume, the materials we use, the DVD we watch – absolutely everything around us, including everything we are made of. It is very useful for *all* science courses as well as engineering courses and all medical and pharmaceutical courses. Please note if a student is likely to study science, or engineering, or a medical course, it is highly unlikely that he will be able to avoid Chemistry and Physics at third level. Chemistry is also seen as an important component in medicine, pharmacy and veterinary science.

Indeed, Chemistry is compulsorily for Veterinary in U.C.D. and Human Nutrition and Dietetics in D.I.T. and will reduce a medicine degree by one year in R.C.S.I. and U.C.D.
For more information please

(i) Reflect on your experience of this subject at Junior Certificate level
(ii) Reflect on what was taught in the 4th year module
(iii) Talk to individual subject teachers
(iv) Check www.ncca.ie and check syllabus/curriculum
(v) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(vi) Check www.examinations.ie and look at previous exam papers with a view to the level of interest in the material rather than the level of difficulty.
(vii) Talk to a 5th year student who is taking this subject
(viii) Talk to a 6th year student who if currently finishing this subject.

Students who have done honours Maths at Junior Certificate level and will continue to do it at Leaving Certificate level should have an aptitude for Chemistry and/or Physics. Students who did honours maths for junior certificate but who will easily get an A/B1 at ordinary leaving certificate level (without a grind) should have an aptitude for Physics and/or Chemistry provided they put in a little extra effort. Students who did ordinary level maths for junior certificate and those that will struggle to get a D/C at ordinary Leaving Certificate level will struggle greatly with physics and/or chemistry.

Biology

Biology is the science all living things. It includes the study of the main systems in the human body, which is very useful in terms of general knowledge relating to health issues. It forms the knowledge base for many science based courses including Nursing, Medicine, Physiotherapy, Dentistry, Veterinary, Genetics, Environmental Science, Food Science and many other technology based courses. It would be a mistake to view Biology as an easier science than Physics or Chemistry (see table of results). Doing well in Biology requires a good memory and a willingness to *learn off*.
For more information please

(i) Reflect on your experience of this subject at Junior Certificate level
(ii) Reflect on what was taught in the 4th year module
(iii) Talk to individual subject teachers
(iv) Check www.ncca.ie and check syllabus/curriculum
(v) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(vi) Check www.examinations.ie and look at previous exam papers with a view to the level of interest in the material rather than the level of difficulty.
(vii) Talk to a 5th year student who is taking this subject
(viii) Talk to a 6th year student who if currently finishing this subject.

If a student is sure he will be doing some form of science/technology/engineering course it is recommended that he take two sciences. Taking no science subject for the Leaving Certificate can rule out a large number of third level courses. Please check *Directory Of Leaving Certificate Entry Requirements*. Also, some courses require two sciences.

Business

Business is concerned with understanding the environment in which business operates. It covers areas such as consumers, producers, investors, employers, employees, industrial relations, entrepreneurial skills, management, human resources, marketing, and the different types of business. Students will learn, to make informed business decisions, understand the structure of management, use commercial principles and knowledge, and appreciate the ethics of business. In addition, students will practice communication, literacy, numeracy and problem solving skills. This subject is very similar to the junior certificate business (without the bookkeeping component) and is very useful for careers/courses in Marketing, Commerce, Finance, Accounting, Actuarial Studies. For more information please

(i) Reflect on your experience of this subject at Junior Certificate level
(ii) Reflect on what was taught in the 4th year module
(iii) Talk to individual subject teachers
(iv) Check www.ncca.ie and check syllabus/curriculum
(v) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(vi) Check www.examinations.ie and look at previous exam papers with a view to the level of interest rather than the level of difficulty.
(vii) Talk to a 5th year student who is taking this subject
(viii) Talk to a 6th year student who if currently finishing this subject.

Accounting

This subject is similar in many ways to the book keeping component of Junior Certificate Business. At Leaving Certificate level analysis and interpretation of accounts is a core activity. It requires the student to think in an analytical, mathematical and logical manner. Although not an essential requirement for most business course, it can be useful for those wishing to pursue any third level business related course as most business course will have an accounting component. It is also useful for careers/courses in banking, insurance and actuarial studies.

For more information please

(i) Reflect on your experience of book keeping in Junior Certificate Business
(ii) Reflect on what was taught in the 4th year module
(iii) Talk to individual subject teachers
(iv) Check www.ncca.ie and check syllabus/curriculum
(v) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(vi) Check www.examinations.ie and look at previous exam papers with a view to the level of interest in the material rather than the level of difficulty.
(vii) Talk to a 5th year student who is taking this subject
(viii) Talk to a 6th year student who if currently finishing this subject.

Economics

Economics is the study of how markets operate, international trade, inflation, national debt, unemployment, taxation, interest rates, government policy and the principles behind how a modern economy operates.

There is no difficult leaving certificate maths in economics but students need to have the ability to think clearly and logically and be able to comprehend abstract ideas. A lot of material is represented graphically and theoretical aspects of the course are then related to current situations in the real economy. All business courses contain an economics component. Economics is useful for courses/careers in business, accounting, the civil service, and banking. Economics also develops critical thinking and analytical skills that are useful in Journalism and Law. For more information please

(i) Reflect on what was taught in the 4th year module
(ii) Talk to individual subject teachers
(iii) Check www.ncca.ie and check syllabus/curriculum
(iv) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(v) Check www.examinations.ie and look at previous exam papers with a view to the level of interest rather than the level of difficulty.
(vi) Talk to a 5th year student who is taking this subject
(vii) Talk to a 6th year student who if currently finishing this subject.

History

One of the main skills developed during the study of History is acquiring a critical approach to information. Student learns to develop an informed opinion about issues. Students also learn to recognise the complexity of issues and the need for balance when dealing with controversial and important events. Students will also learn to see issues from a wide variety of perspective (e.g. political, social, economic) and learn to support an argument, organising ideas, express clear opinion, and reach balanced conclusions. Reading and essay writing are central to this subject. Although History at Leaving Certificate is not essential to study History at third level, the skills obtained are useful in courses/careers in English, Journalism, Law, Politics, and Sociology.

For more information please

(i) Reflect on your experience of this subject at Junior Certificate level
(ii) Reflect on what was taught in the 4th year module
(iii) Talk to individual subject teachers
(iv) Check www.ncca.ie and check syllabus/curriculum
(v) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(vi) Check www.examinations.ie and look at previous exam papers with a view to the level of interest in the material rather than the level of difficulty.
(vii) Talk to a 5th year student who is taking this subject
(viii) Talk to a 6th year student who if currently finishing this subject.

Geography

This subject covers areas such as the interrelationship between activities and the physical environment. It also includes the study of populations, farming, volcanoes, earthquakes, landscapes and other aspects of both physical and human and social geography. Geography is considered a science subject for some science courses in T.C.D. (It needs to be remembered that other 3rd level institutes do not consider Geography to be a laboratory science). Geography will be useful for career/courses in agriculture, horticulture, forestry, architecture, tourism, urban planning, environmental studies, weather forecasting, overseas development, and some science/environmental areas.

For more information please

(i) Reflect on your experience of this subject at Junior Certificate level
(ii) Reflect on what was taught in the 4th year module
(iii) Talk to individual subject teachers
(iv) Check www.ncca.ie and check syllabus/curriculum
(v) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(vi) Check examinations.ie and look at previous exam papers with a view to the level of interest in the material rather than the level of difficulty.
(vii) Talk to a 5th year student who is taking this subject
(viii) Talk to a 6th year student who if currently finishing this subject.

Religion

Religious Education explores issues of relevance in an informed and academic way, issues such as - meaning and values, the nature of morality, the development and diversity of beliefs, the principles of a just society and the implications of scientific progress. Religious Education offers deep insight into the evolution of religion since ancient times. This will inform your understanding of modern culture. Religious Education examines the Christian tradition as well as other traditions. Students who have studied R.E at Leaving Cert level have learned to be: critical thinkers, independent, objective, open-minded, balanced, informed and focused, yet aware of a variety of perspectives. In addition, they also develop the skills of research, communication, and to analyse issues, trends, and problems in an unbiased manner. These skills are valued in a number of professions, including, the fields of education, teaching (at both primary and post-primary) Law, Journalism, Human Resources, administration, Civil Service and many other occupations. For more information please

(i) Reflect on your experience of this subject at Junior Certificate level
(ii) Reflect on what was taught in the 4th year module
(iii) Talk to individual subject teachers
(iv) Check www.ncca.ie and check syllabus/curriculum
(v) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(vi) Check www.examinations.ie and look at previous exam papers with a view to the level of interest rather than the level of difficulty.
(vii) Talk to a 5th year student who is taking this subject.
(viii)

Technology, Music and Art

These subjects are normally only taken by those that have studied these subjects at Junior Certificate Level. In addition, for students to continue with these subjects to Leaving Certificate level it would be important to have developed a natural liking and aptitude towards these areas. Although Art is not a necessary requirement for third level course it is highly recommended for those intending to do an Art course particularly those that require a portfolio. Art will lay a solid foundation for many third level courses including, graphic design, advertising, Architecture and Industrial design. Preparation of a portfolio should not be left until 6th year. Art can be used to replace the basic requirement of a language in the National College of Art & Design. Art is useful for careers/courses in architecture, graphic design, photography, advertising, media production and areas of design such as, painting, interior design, fashion design, and graphic design. For more information please

(i) Reflect on your experience of this subject at Junior Certificate level
(ii) Reflect on what was taught in the 4th year module
(iii) Talk to individual subject teachers
(iv) Check www.ncca.ie and check syllabus/curriculum
(v) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(vi) Check www.examinations.ie and look at previous exam papers with a view to the level of interest in the material rather than the level of difficulty.
(vii) Talk to a 5th year student who is taking this subject
(viii) Talk to a 6th year student who if currently finishing this subject.

Applied Maths

This subject applies mathematics to solving practical problems. Examples of these problems include, the relative velocity of ships at sea, the velocity and acceleration of bodies falling or being projected under gravity the conservation of momentum and energy in collisions. Other problems include equilibrium of forces on static bodies and pressure of fluids on immersed bodies and the motion of various types of pendulum, and the application of differential equations to more complex motion. Taking Applied Maths for Leaving Certificate is a way to develop skills in applying Mathematics to real life problems. This skill is useful for any later career where Maths is used, even slightly. These careers range from Engineering and Science to Economics and Business. If a student likes the practical end of maths and enjoys Soduku or other mathematical based entertainment, then Leaving Certificate Applied Maths may be a good choice. However, although the principals of the courses are easily understood, readiness to do (and doodle with) many problems (and to spend the time that this takes) is a must. The outcome can be a lot of satisfaction and a very good grade in the subject. Applied Mathematics is particularly suitable for those students who study both Physics and Mathematics at honours level and intend to progress to a science/engineering/technology course. For more information please

(i) Talk to individual subject teachers
(ii) Check www.ncca.ie and check syllabus/curriculum
(iii) Browse a current textbook with a view to the level of interest in the material rather than the level of difficulty.
(iv) Check www.examinations.ie and look at previous exam papers with a view to the level of interest in the material rather than the level of difficulty.
(v) Talk to a 5th year student who is taking this subject
(vi) Talk to a 6th year student who if currently finishing this subject.

Checking Previous Exam Papers

Care needs to be taken when checking the content of previous exam papers. Below are examples from the Business exam paper and the Physics exam paper. The immediate respond to the Business question might be "*that's easy – I can do that*", and the response to the Physics question might be "*I don't know how to do that – that's hard*". This is not an appropriate response. The previous exam papers should be viewed with the following in mind, "*I would be interested in find out how to answer/solve that problem/question*".

8. Write *True* or *False* after each of these sentences.

	Sentence	True or False
1.	The role of the IDA is to attract foreign direct investment into Ireland.	
2.	Privatisation is the transfer of ownership from the private sector to the government owned public sector.	
3.	A code of ethics is a set of moral rules clarifying expected behavior of individuals in business.	
4.	An environmentally conscious business uses clean production processes and packaging which can be recycled.	
5.	An increase in the value of the euro € against the US dollar $ is good for Irish exporters to the US.	

(*c*) A simple merry-go-round consists of a flat disc that is rotated horizontally. A child of mass 32 kg stands at the edge of the merry-go-round, 2.2 metres from its centre. The force of friction acting on the child is 50 N.

Draw a diagram showing the forces acting on the child as the merry-go-round rotates.

What is the maximum angular velocity of the merry-go-round so that the child will not fall from it, as it rotates? (18)

If there was no force of friction between the child and the merry-go-round, in what direction would the child move as the merry-go-round starts to rotate? (5)

Overlap of Subject Content?

State Exams Commission regulations state that when there is a certain degree of content overlap between two subjects students are prohibited from sitting both of these subjects. For example, students are not allowed sit both Latin and Classics. Another example is students are not allowed sit (the combined subject) of Physics/Chemistry and Chemistry, or sit Physics/Chemistry and Physics. There is a common perception that there is content overlap between Honours Maths and Physics or Physics and Applied Maths or overlap between all three. This is not the case. If it were,, students would be prohibited from sitting exams in more than one of these subjects. Similarly, there is a perception that there is content overlap between Biology and Agricultural Science. Again, if there was, students would not be able to sit both exams. (There may be a tiny/very small percentage of content overlap between some of these subjects – but not enough to obtain any advantage). The question needs to be addressed as to why people perceive that there is considerable overlap in content. Nobody considers that there is overlap between English and History. However, those that obtain an A in English tend to well in History (or Religion). Is this because that there is overlap in the skills employed in studying these subjects? Is it that they tap into the same aptitudes? This overlap in skills and aptitude may help to explain why students think there is in overlap in Honours Maths, Physics and Applied Maths, and indeed, the other examples mentioned above.

Teacher Driven Selection

In the past some students have selected to study a particular subject in college based on their experience of that subject in 5th and 6th year. When they enter college their opinion of that subject can change. Looking back, they often comment that they mistook the enjoyment of a subject with the enjoyment of the teacher and the atmosphere in the class. This can also occur when selecting subjects for the Leaving Certificate. Indeed, it is acknowledge that having a particular teacher can greatly help the success of students. However, caution needs to be taken. Selecting a subject on the basis of a certain teacher's style or the atmosphere in that class *only* can result in a negative experience for the next two years if there is not also an aptitude and interest in that subject.