

INTRODUCTION¹

Q. What am I trying to do?

You are aiming to choose a meaningful, manageable package of subjects (a set of subjects which will give you a sense of direction, will provide self-motivation and which are achievable).

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) Your interest in or liking for a subject.
- (ii) Your aptitude towards a subject.
- (iii) The value of a subject for your 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.

Q. What decisions must I make?

There are three core subjects- Irish, English and Maths. Your Junior Cycle results may determine/indicate what level you take these subjects at.

You must decide if you intend to take a continental language (French or Spanish)

A continental language is required for entry to National University of Ireland (NUI) Universities and Colleges affiliated to the NUI (with some exceptions in the faculties of Engineering and Science; and Business and Law in Maynooth University).

What **four** subjects you wish to take from the following choice:

Biology	Accounting	French	DCG (Technical Graphics)
Chemistry	Business	Spanish	Construction Studies (Woodwork).
Physics	History	Music	Technology Applied Maths
Agricultural Science	Geography	Art	Religion Politics and Society

IN ORDER TO MAKE THE CORRECT DECISIONS IT IS IMPORTANT TO PUT THOUGHT INTO THE PROCESS. RESEARCH WELL IN ORDER TO GET ACCURATE INFORMATION.

¹ Disclaimer: While every effort was made to include accurate information in this booklet, it should be used for guidance only, and students should source information directly from college prospectuses/websites to insure that the information is completely up to date before making any decisions.

The following questions are designed as a guide-line to help you to make the correct decisions:

1. *What is the content and approach of each subject?*

Be aware of the differences in content and approach between the Junior and Senior cycle

2. *What subjects are you interested in?*

Genuine interest is important in terms of motivation

3. *What subjects are you good at?*

Chatting to your teachers may help you to gauge your ability within a subject area, but remember attitude is as important as ability. Talk to Ms Burke about your DAT's.

4. *Are there subjects that complement each other?*

e.g. Mathematics and Physics, DCG and Construction Studies etc. If you are good at problem solving in Physics, then you may also be good at problem solving in Accounting, Technology etc. If you can write well in English, then you may also write well in History and Geography. Skills overlap between different subjects. What skills do you have?

5. *What subjects have I taken for Junior Cycle?*

While it may be possible to study a subject you have not studied to Junior Cycle, this can be very difficult in particular subjects. ***It is therefore important to talk to the subject teacher prior to filling in your selection form.*** In every case it requires a huge commitment on the part of the student.

6. *What careers/career areas are of interest to me?*

Career interest's inventories may be useful here (e.g. Careers Portal Interest Profiler)

7. *If you aim to attend Third Level, or further education or directly enter the workforce, consider what subjects are:*

- (i) Essential (needed)
- (ii) Desirable for courses/areas of work (useful)
- (iii) Have a possibility of taking at higher level and provide more CAO points

8. *Do you have a definite career direction?*

If so, choose a combination of appropriate subjects to enhance career prospects, but be aware of the cost of not doing a particular subject.

9. *What should I do if I am unclear and wish to keep my options as open as possible?*

It may be advisable to choose subjects from different groups:

- 1. Science- Physics, Chemistry, Biology, Agricultural Science
- 2. Applied Science- Construction Studies, DCG, Technology
- 3. Languages- French, Spanish
- 4. Social Studies- History, Geography, Religion, Art, Music, Politics and Society
- 5. Business- Accounting, Business

GET as much advice as possible- **BUT** be aware of bias or incorrect information

REMEMBER the number of **courses and jobs** which **require specific subjects** are **quite small**.

However, it **may** be a mistake to:

- (a) opt not to take a third language (173 courses require; 12 may require)
- (b) opt not to take a science subject (139 courses require; 66 may require)

Practically all science, medical, paramedical and engineering courses require at least one laboratory science for level 8 courses, i.e. honours degree level courses.

A SCIENCE SUBJECT

- **2 Science Subjects are Required for:**

UCC	Medicine, Dentistry	H4 in Chemistry, and H4 in Physics or Biology (A few CAO Medicine applicants may enter the 5 year programme by entering Stage 2 directly. Such places are offered to graduates or applicants with third level experience and Chemistry/Biochemistry knowledge. School leavers are not usually considered).
	Pharmacy	H5 in Chemistry, and H4 in Physics or Biology
	Medical and Health Science	H4 in Chemistry and O6/H7 in Biology, Physics or Agricultural Science
TCD	Pharmacy	H4 Chemistry and H4 In one of Physics, Biology, Mathematics, Applied Mathematics, Geography, Computer Science or Agricultural Science
	Physiotherapy	H4 In two of Physics, Chemistry, Biology, Physics/ Chemistry, Mathematics or Agricultural Science
	Dental Science	H3 + H4 In two of: Physics, Chemistry, Biology, Physics/ Chemistry, (and O4/H6 in Maths if Physics not included).
	Human Health and Disease	H4 Biology and H4 In one of Physics, Chemistry, Physics/Chemistry
	Human Health and Disease	H4 in Biology and H4 in one of Physics, Chemistry, Physics/ Chemistry,
	Biological and Biomedical Science; Chemical Science; Geography and Geoscience; Physical Sciences.	H4 In two of: Physics, Chemistry, Biology, Mathematics, Physics/Chemistry, Geography, Applied Mathematics, Computer Science or Agricultural Science
	Medicine	1 H3 and 1 H4 from Physics, Chemistry, Physics/Chemistry; Biology and Agricultural Science (and O4/H6 in Maths if Physics not included).
RCSI	Medicine (5 year)	H4 in Chemistry and H4 in Physics or Biology. (6 year programme accepts O6/H7 in Biology, Chemistry, Physics, Physics/Chemistry, or Agricultural Science)
NUI Galway	Medicine	H4 in 2 of Biology, Physics, Chemistry, Physics/chemistry, Agricultural Science or Technology (5 Years) or O6/H7 in Biology, Physics, Chemistry, Physics/Chemistry or Agricultural Science (6 Years)

The requirements are quite detailed so check the admission requirements carefully.

- **H3 in a Science Subject Required for:**

TCD	Theoretical Physics	H3 in Physics and Maths
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- **H4 in a Science Subject Required for:**

CIT/UCC	Biomedical Science; Industrial Physics	H4 in either Biology, Physics, Chemistry, Physics/Chemistry, Agricultural Science
UCC	Genetics	H4 Biology

	Biological and Chemical Sciences, Biological Earth and Environmental Science, Chemical Sciences, Physics and Astrophysics, Nutritional Sciences, Food Science	H4 in either Biology, Physics, Chemistry, Physics/Chemistry, Agricultural Science, Maths or Applied Maths. If H4 in Lab Science subject, then an O6/H7 in Maths required or vice versa.
	Public Health Sciences	H4 in either Biology, Physics, Chemistry, Physics/Chemistry, Agricultural Science, Maths or Applied Maths.
	Engineering	H4 in either Biology, Physics, Chemistry, Physics/Chemistry, Agricultural Science, or Technology.
	Occupational Therapy, Speech and Language Therapy	H4 in either Biology, Physics, Chemistry, Physics/Chemistry, or Agricultural Science
TU (CITY CAMPUS)	Science (general)	H4 in either Physics, Chemistry, Biology, Physics/Chemistry, Agricultural Science, Technology, Engineering or Applied Maths
	Analytical Chemistry, Chemical Sciences with Medicinal Chemistry	H4 in either Physics, Chemistry, Biology, Physics/Chemistry or Technology
	Biomedical Science, Biomedical and Molecular Diagnostics, Optometry, Public Health Nutrition	H4 in either Physics, Chemistry, Biology, or Physics/Chemistry
	Physics with Energy and Environment, Physics Technology, Science with Nanotechnology, Physics with Medical Physics and Bioengineering	H4 in either Physics, Chemistry, Biology, Physics/Chemistry, Maths, Applied Maths Agricultural Science, DCG, Engineering, or Technology
	Human Nutrition and Dietetics	H4 in Chemistry
	Clinical Measurement Science	H4 in either Maths, Applied Maths, Physics, Chemistry, Biology, Physics/Chemistry, Agricultural Science, Engineering, or Technology
	Physics and Data Science	H4 in Physics, Chemistry, Biology, Physics/Chemistry, Maths, Applied Maths, Agricultural Science, Engineering, Technology, Computer Science or DCG.
TCD	Clinical Speech and Language Studies	H4 in either Maths, Applied Maths, Physics, Chemistry, Biology, Physics/Chemistry or Agricultural Science
	Occupational Therapy	H4 from Physics, Chemistry, Biology, Physics/Chemistry, or Agricultural Science
	Radiation Therapy	H4 from Physics, Chemistry, Biology, and Physics/Chemistry
UL	Physics	H4 in either Applied Maths, Physics, Chemistry, Physics/Chemistry, Engineering
	Food Science and Health, Biological and Chemical Sciences, Equine Science (level 8, not level 7)	H4 in Applied Maths, Physics, Chemistry, Biology, Physics/Chemistry, or Agricultural Science,

- **H5 Science Subject Required for:**

RCSI	Pharmacy	H5 in Chemistry
UCD	Veterinary Medicine	H5 in Chemistry (60 hours animal handling experience)
Dundalk IT	Veterinary Nursing	H5 in Biology or Agricultural Science
Waterford IT	Sustainable Energy Engineering, Mechanical and Manufacturing Engineering	H5 in a Lab. Science or Technology Subject

- **O3/H5 Science Subject Required for:**

DCU	Analytical Science, Chemical and Pharmaceutical Science, Genetics with Cell Biology, Biotechnology, Science, Physics (General Entry), Common Entry Science	O3/H5 in Physics, Chemistry, Biology, Physics/Chemistry, Computer Science or Agricultural Science
	Environmental Science and Technology	O3/H5 in Physics, Chemistry, Biology, Physics/Chemistry, or Agricultural Science.

- **H6 in Science Subject Required for:**

UCD	Engineering	H6 in Biology, Physics, Chemistry, Physics/Chemistry or Agri. Science
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- **O2/H6 in a Science Subject Required for:**

UCD	Science	O3/H6 in Biology, Chemistry, Physics, Geography, Physics/Chemistry, Agricultural Science, Computer Science or Applied Maths
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- **O4/H6 in Science Subject Required for:**

DCU	Sports Science & Health, Science Education, Athletic Therapy & Training, Physical Education with Biology, Physical Education with Mathematics	O4/H6 in Biology, Physics, Chemistry, Physics & Chemistry or Agricultural Science
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- **O6/H6 in a Science Subject Required for:**

TCD	All Nursing	O6/H6 in Biology, Chemistry, Physics, Physics/Chemistry or Agricultural Science
Dundalk IT	Health and Physical Activity	O6/H6 in Biology, Chemistry, Physics, Physics/Chemistry or Agricultural Science

- **O3/H7 in a Science Subject Required for:**

AIT	Veterinary Nursing, Dental Nursing	O3/H7 in any science based subject
UL	Sports and Exercise Science	O3/H7 in Applied Maths, Biology, Chemistry, Physics, Physics/Chemistry, Agricultural Science or PE.
	Physiotherapy	O3/H7 in Biology, Chemistry, Physics, Physics/Chemistry, Agricultural Science or PE.

- **O4/H7 in Science Subject Required for:**

TU (CITY CAMPUS)	Nutraceuticals in Health and Nutrition, Pharmaceutical Healthcare, Environmental Health.		O4/H7 in Biology, Physics, Chemistry, or Physics/Chemistry
	Culinary Science, Food Innovation	O4/H7 in Biology, Physics, Chemistry, Physics/Chemistry, Applied Maths, Home Economics, or Agricultural Science	
	Ophthalmic Dispensing	O4/H7 in Biology, Physics, Chemistry, Physics/Chemistry, Applied Maths, Home Economics, Engineering or Agricultural Science	
UL	Technology Management, Product Design and Technology (+ portfolio), Construction Management and Engineering, Materials and Engineering Technology with concurrent Teacher Education, Materials and Architectural Technology with concurrent Teacher Education,		O4/H7 in Applied Maths, Biology, Physics, Chemistry, Physics/Chemistry, Technology, Construction, Engineering, Agricultural Science, Computer Science or DCG
	Science with concurrent Teacher Education (Physics/chemistry), Science with concurrent Teacher Education - Biological Sciences with Physics or Chemistry		O4/H7 in Applied Maths, Biology, Physics, Chemistry, Physics/Chemistry, or Agricultural Science

- O6/H7 in a Science Subject Required for:**

AIT	Pharmacy Technician; All Nursing Courses	O6/H7 in any Lab Science based subject
UCC	Engineering	O6/H7 in either Biology, Physics, Chemistry, Physics/Chemistry, Agricultural Science, or Technology (and H4 Maths or H4 in Applied Maths and H6 in Maths)
	All Nursing	O6/H7 in Biology, Chemistry, Physics/Chemistry, or Agricultural Science
DCU	Health and Society; All Nursing	O6/H7 in one of Physics, Chemistry, Physics/Chemistry, Biology or Agricultural Science
Dundalk IT	All Nursing	O6/H7 in Biology, Chemistry, Physics, Physics/Chemistry or Agricultural Science
TU (CITY CAMPUS)	Food Science and Management	O6/H7 in in Biology, Physics, Chemistry, Physics/Chemistry, Home Economics, or Agricultural Science
	Pharmacy Technician Studies	O6/H7 in in Biology, Chemistry, or Physics/Chemistry
RCSI	Medicine (6 Year); Physiotherapy	O6/H7 in Biology, Chemistry, Physics, Physics/Chemistry or Agricultural Science
TCD	Dental Nursing, Dental Hygiene, Dental Technology	O6/H7 in Biology, Chemistry, Physics, Physics/chemistry or Agricultural Science
NCAD	Product Design, Interaction Design	O6/H7 in Art or DCG OR O6/H7 in Physics, Chemistry, Physics with Chemistry, Engineering, Construction Studies, Agricultural Science, Technology, or Biology.
UCD	Agricultural Science, Dairy Business, Agri-Environmental Science, Food Science, Human Nutrition, Forestry, Horticulture, Landscape and Sportsturf Management, Medicine, Radiography, Physiotherapy, Health and Performance Science, Sport and Exercise Management, Biomedical Health and Life Science, All Nursing, Veterinary Nursing	O6/H7 in Biology, Chemistry, Physics, Physics/Chemistry or Agricultural Science

GMT	All Nursing, Medical Science	O6/H7 Biology, Chemistry, Physics, Physics/Chemistry or Agricultural Science
NUIG	Science (common entry), Biomedical Science, Biotechnology, Environmental Science, Marine Science, Environmental Health and Safety, Earth and Ocean Sciences, Biopharmaceutical Chemistry, Mathematical Science, Physics, Occupational Therapy, Speech and Language Therapy, Podiatric Medicine, All Nursing	O6/H7 in Biology, Physics, Chemistry, Physics/Chemistry or Agricultural Science
	BSc (Geography and Geosystems); Genetics and Genomics	O6/H7 in Biology, Physics, Chemistry, Physics/Chemistry, Computer Science or Agricultural Science
	Computer Science and Information Technology, Engineering (common entry), Civil Engineering, Mechanical Engineering, Electronic and Computer Engineering, Biomedical Engineering, Project and Construction Management, Energy Systems Engineering, Electrical and Electronic Engineering,	O6/H7 in Biology, Physics, Chemistry, Physics/chemistry, Agricultural Science or Technology
	Medicine	O6/H7 in Biology, Physics, Chemistry, Physics/Chemistry or Agricultural Science (6 Years) or H4 in 2 of Biology, Physics, Chemistry, Physics/chemistry, Agricultural Science or Technology (5 Years)
	Financial Mathematics and Economics	O6/H7 in Biology, Physics, Chemistry, Physics/chemistry, Agricultural Science OR O6/H7 in a language
Letterkenny IT	All Nursing, Veterinary Nursing, Pharmacy Technician, Dental Nursing	O6/H7 in Biology, Physics, Chemistry, Physics/Chemistry or Agricultural Science
UL	Aeronautical Engineering, Engineering, Chemical and Biochemical Engineering, Electronic and Computer Engineering	O6/H7 in one of Physics, Chemistry, Biology, Physics/Chemistry, Technology, Engineering, DCG, Agricultural Science, Applied Maths, Computer Science or Construction
	All Nursing, Paramedic Studies	O6/H7 in one of Physics, Chemistry, Biology, Physics/Chemistry, or Agricultural Science Also B and C1 drivers licence for 4 paramedic studies
Maynooth University	Science, Physics with Astrophysics, Theoretical Physics and Mathematics, Data Science, Science or Mathematics with Education	O6/H7 in either Biology, Chemistry, Physics, Physics/Chemistry, Applied Maths, Computer Science or Agricultural Science
	Biotechnology, Biological and Geographical Science, Biological and Biomedical Science, Psychology through Science, Pharmaceutical and Biomedical Chemistry	O6/H7 in either Biology, Chemistry, Physics, Physics/Chemistry, Computer Science or Agricultural Science
	Engineering;	O6/H7 in either Biology, Chemistry, Physics, Physics/Chemistry, Applied Maths, Agricultural Science, Computer Science or Technology

	Product Design	O6/H7 in Biology, Chemistry, Physics, Physics/Chemistry, Agricultural Science, Engineering, Technology, Construction or DCG
St. Angela's	Home Economics with Biology, Nutrition, Food & Business Management, All Nursing,	O6/H7 in a Lab Science Subject
	Home Economics with Religion; Home Economics with Irish; Home Economics with Economics	O6/H7 in a Lab Science Subject or Home Economics
Tralee IT	All Nursing	O6/H7 in Agricultural Science, Biology, Chemistry, Physics or Physics/Chemistry
Waterford IT	All Nursing	O6/H7 in Agricultural Science, Biology, Chemistry, Physics or Physics/Chemistry
	Science, Pharmaceutical Science, Agricultural Science, Food Science with Business, Molecular Biology with Biopharmaceutical Science	Recommended: Biology, Chemistry, Agricultural Science, Physics, Physics/Chemistry

OTHER GENERAL REQUIREMENTS TO BEAR IN MIND

- Primary Teaching- H5 in Irish, O4/H7 in English and O4/H7 in Maths
- NUI Colleges (University College Dublin, University College Cork, NUI Galway, NUI Maynooth, NCAD, RCSI and colleges affiliated to NUI)- Irish, English, Maths are usually required, along with a third language for arts, medical, business, law and language courses, and a laboratory science subject for engineering and science courses.
- Degrees in Engineering- H4 in Mathematics and a grade O6/H7 in Science or sometimes a technology based Subject (Ordinary level Maths for most I.T. Courses)
- Journalism- Minimum of H4 in English generally required
- To study a Language at degree level students need to have a minimum Leaving Certificate Higher level H3 in the language they intend to study (except where these are offered at *ab initio* level)

Summary of entry requirements to colleges: (Specific course requirements also apply in addition to the college requirements)



**Maynooth University,
NUI Galway
University College Dublin
University College Cork**

Two H5 and Four O6/H7 to include:
English
Irish
Mathematics
A Third language (except Engineering and some science Courses, and Law and Business courses in Maynooth University)



**Trinity College Dublin (TCD)
University of Limerick (UL)**

TCD: Three H5 and three O6/H7 to include:
English.
Mathematics
Another language*

UL: Two H5 and Four O6/H7 to include: .
English



**Dublin City University
Institutes of Technology
(Honours Degrees)**

Two H5 and Four O6/H7 to include:
English or Irish
Mathematics

Mathematics,
Irish or another
language*

Irish Exemption Warning in relation to “another language” in UL and TCD. If you are exempt from Irish because you came here after the age of 11 or because you were born outside of Ireland, you will be required to present a different language subject in your leaving Certificate in UL and TCD (e.g. French, Spanish, Polish).

ACCOUNTING

Mr Cassidy

Accounting is a subject that suits the organised methodical person who likes definite answers. Students of accounting move beyond the actual making of records, i.e. book-keeping, and deal with how these records are used, their analysis and interpretation. Students will be able to see and understand published company accounts, make comparisons of performance between companies, be able to take care of the basic accounting needs of a small business, club, farm or service firms (cash flows, final accounts, budgeting etc.), study the production of information needed for management decision-making etc.

Accounting is required for the following third level courses:

Accounting is an excellent preparation for any business related occupation. It is a requirement for Commerce (Accounting) (NUIG) (H4 in Accounting).

Though it is not essential for entry into many business courses or professional training in accountancy, it would be a great help to students wishing to pursue any third level business related course. Students who are considering a career in accountancy are also highly recommended to study accounting, as it is a good indicator of suitability.

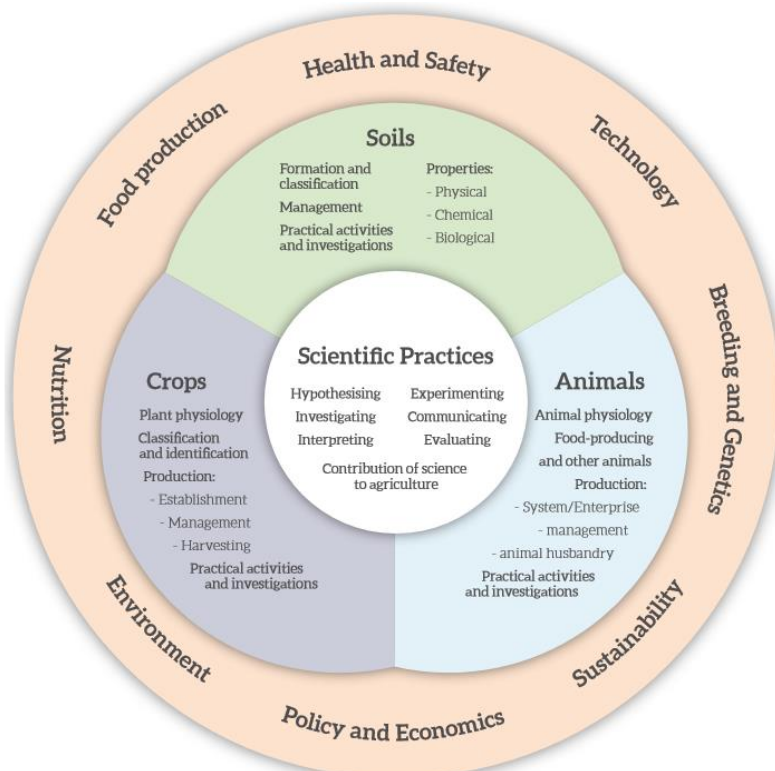
Accounting is useful for careers in:

Accounting Technician; Accountancy, Auctioneering; Auditing; Banking; Book-keeping; Building Society Clerk; A vast array of Clerical Work; Business Teacher, Engineering; Company Secretaryship; Hospital Administration; Hotel Management; Receptionist; Insurance; Market Research; Purchasing Officer; Quantity Surveyor; Sales Representative; Store Manager; Taxation Consultant; Marketing; Teaching; Computer Systems; Advertising; Business Law. It is in fact hard to think of any careers where some knowledge of Accounting would not be useful.

AGRICULTURAL SCIENCE

Mr Molloy / Mr Collins

Leaving Certificate agricultural science involves the study of the science and technology underlying the principles and practices of agriculture. It aims to develop knowledge, skills and attitudes that promote the sustainability of agricultural resources, and places emphasis on the managed use of these resources. Plants and animal types associated with agriculture are studied, and investigations are undertaken into such aspects as soil, ecology, plant and animal physiology, farm crops, farming practices, genetics and microbiology. The new specification is broken into 4 strands: Soils, Crops, Animals and Scientific Practices.



Requirements of the course:**SPECIFIED PRACTICAL ACTIVITIES**

Over the two years of the course, each learner is required to complete and prepare reports on the specified practical activities. The reports will not be externally assessed, but must be available for inspection and retained until the end of the assessment process.

INDIVIDUAL INVESTIGATIVE STUDY (IIS)

As well as the specified practical activities, each student is required to carry out an individual investigative study related to a topic in agricultural science. The individual study is an investigative activity which is based on and draws from a thematic brief set annually by the State Examinations Commission at the commencement of the two year course. It is conducted over the two years of the course and facilitates study of particular areas in greater depth and which may be of local or regional agricultural significance. It enables students to see at a practical level how science underpins and supports agricultural practices, processes and research.

Assessment:

ASSESSMENT COMPONENT	PERCENTAGE
Written	75
▶ short answer questions	
▶ structured questions	
▶ synoptic questions	
Coursework	25
▶ Individual investigative study	

Short questions: address core topics across the entire specification; are made up of both multiple choice and short answer questions and focus on concepts and skills.

Structured questions: are drawn from one area of the specification; each structured question may include a variety of scientific ideas in the context of one agricultural science topic.

Synoptic questions: these questions will require students to collate knowledge across a number of agricultural science topics.

Agricultural Science is a requirement for the following third level courses:

Agricultural science is accepted as a science subject in some third level colleges in Ireland (for 179 courses), though it may not meet special course requirements where a specific science subject is requested.

Agricultural Science is useful for careers in:

Agricultural Engineering; Agricultural Inspector; Agricultural Officer; Agricultural Sales; Agricultural Science Teacher; Animal Breeder; Animal Trainer; Botanist; Biologist; Butter-maker and cheese maker; Clerk in an Agricultural Organisation; Conservation; Creamery Manager; Dairy Scientist; Farmer; Food Science Technologist; Forester; Forestry Inspector; Horticulturalist; Laboratory Technician; Seed Analyst; Stud Farm Employee; Fish Farmer; Veterinary Surgeon; Veterinary Nurse; Zoologist.

APPLIED MATHS
Collins

Mr

There is a common misconception that Applied Maths is a harder and more advanced version of regular Maths. This is not the case. Applied maths, or “mathematical physics” as it is sometimes known, is all about applying mathematics to physics problems. Applied Maths is about problem solving and appeals to people who enjoy applying their knowledge to specific tasks.

Anyone taking the course needs to have a strong grasp of maths. It is how the mathematical knowledge is used that makes applied maths different. As well as having a very good mathematical ability, you will also need to be good at solving logic problems. Spotting clues in a question and working out how to use the clue to solve the problem. The maths only comes in, once you have worked out what logical approach you will need to take. If you enjoy maths and have a good logical brain, then this is the subject for you!

The Applied Maths course consists of 10 topics. These are as follows:

- Uniformly Accelerated Motion
- Relative Velocity
- Projectiles
- Newtons's Laws
- Impacts and Collisions
- Circular Motion
- Statics
- Moments of Inertia
- Hydrostatics
- Differential Equations

Assessment:

The Leaving Cert exam is 2 hrs 30 mins long and during this time you are required to answer 6 out of the 10 questions given on the paper. Applied Maths is very much a practice based subject. It is not possible to achieve a pass grade purely through learning, understanding the material and being able to apply that understanding is essential. The only way to get good at Applied Maths is to practice as often as possible and as many different questions as you can get your hands on.

Applied Maths is a requirement for the following third level courses:

Applied Maths is accepted as a science subject in some third level colleges in Ireland for some engineering, physics or science related courses (for 67 courses). It may also be used in place of a higher level Maths grade in some courses. For Example, In UCC for Engineering if a H4 in Maths is not presented, one can gain entry having a H4 in Applied Maths and H6 in Maths.

Applied Maths is useful for careers in:

Systems Biology (technology, medicine, and drug development and design); Data Mining and Data Privacy Data mining (security, forensics, e-commerce, bioinformatics and genomics, astrophysics, medicine, and chemical and electrical engineering); Materials Science (science, manufacturing, and materials design for applications in fields such as aerospace, engineering, electronics, biology, and nanotechnology. Computer Animation and Digital Imaging (medical diagnostics, entertainment (film, television, and video games). Finance and Economics (banks, insurance companies, investment and securities firms, energy companies and utilities, multinationals, corporations, government regulatory institutions, and other industries have come to rely on applied mathematics and computational science), Ecology/Epidemiology/Environment (look at populations and their interactions and model them as systems of differential equations that can be used to model diseases in human populations), Climatology (Climatology depends on simulating the component forces that drive the climate, for example, ocean circulation and heat exchange between land, air, and ocean. It requires very sophisticated models based on physical principles, expressed as complex partial differential equations).

ART Garry	Ms Carroll / Ms
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Leaving Certificate Art aims to develop in learners the knowledge, skills, understanding and values needed to bring an idea to realisation and to respond to, understand, analyse and evaluate their own work and the work of others. Each learner is a unique individual and will be enabled to develop their own skill set in a personal way. The learner will become aware of the world of Visual Studies, how it can inform their own work and life, and thereby become more aware of their own place in a wider society

The new specification (from Sept 2020) is broken into three strands:

1. Research

During the process of studying Art, learners will learn how to become a visual researcher; a conceptual explorer; a cultural archaeologist. As part of the research process you will learn to select a stimulus, choose a

primary source and develop your ideas further. Learners will also have the opportunity to use their locality, such as galleries, museums, architecture, public sculpture and more for research purposes.

The learning outcomes in this strand address research methods. Learners learn by and through **Looking** using primary sources or examples of significant works of Visual Studies; by **Recording and documenting** their thoughts, ideas, findings and observations in their sketchpads; through **Experimenting and interpretation** of what they observe and the work and ideas they then develop; by being cognisant of the evolving world around them through **Contextual enquiries** and by explicitly following a Process.

2. Create

In Art, learners will be engaged in the process of making/creating art from conception through to realisation. Using a range of skills and their chosen materials, as appropriate, learners will create work based on a stimulus. In learning to create work, the learning outcomes describe and capture the **Making** involved; the use of **Contextual enquiries**, especially in learning to understand and use the art elements and design principles; **the Process** involved in following lines of enquiry and deciding on the realised work; the knowledge, skills and understanding required to communicate through the **Realisation/Presentation** of their work.

3. Respond

Art provides an opportunity to reflect on and respond to your work objectively and critically. In generating a response to work, learners may do so emotionally, critically, aesthetically or contextually, or through a combination of these. You will learn to value your decisions and processes and be willing to edit and select from your ideas and work so that you are able to explain your choices and decisions.

The learning outcomes related to Responding involve the use of **Analysis**; the making of **Contextual enquiries** to further understanding and knowledge; looking at ways to judge Impact and value; employing **Critical** and personal reflection; and learning to think about and rationalise their **Process**.

Assessment:

ASSESSMENT COMPONENT	WEIGHTING	LEVEL
Practical coursework	50%	Higher and Ordinary
Practical Examination	20%	Higher and Ordinary
Written examination	30%	Higher and Ordinary

Practical Coursework (50%)

The practical coursework component requires learners to produce a realised work, from a stimulus, over an extended time period. The use of primary sources, including observational drawings, life drawing and drawing from the imagination are important. Learners will receive the SEC coursework brief at the beginning of Term 2 (Year 2). In the brief, the SEC will outline the time period in which the practical coursework must be completed. During this period, learners will be required to realise one piece of work and plan and develop work for the realisation of a second piece of work during the practical examination.

Practical Examination (20%)

The practical examination component will take place as soon after the completion of the practical coursework component as possible, and within 5 hours of a single day. Information on the examination will be included in the coursework brief issued by the SEC. Learners will create a second realised work for this examination, based on the same stimulus and the ideas and work they researched and developed during their overall coursework project

Written Examination (30%)

The written examination will have a range and balance of question types suited to Visual Studies and the application of practical knowledge. The questions will focus on a broad understanding of Visual Studies and will require learners to demonstrate knowledge and understanding, and an ability to apply, analyse, evaluate and respond as appropriate.

To take Art at Leaving Certificate level it is advisable that the student would have studied Art at Junior Cycle. Art requires a certain aptitude. It is important to note that the course involves a large amount of study along with practical skills. The Leaving Certificate Art course demands much commitment.

Art and third level:

Art is a requirement for some Institute of Technology Art courses; it is not always an essential subject for entry into Art College. Yet it is highly recommended that intending students take it at Leaving Certificate level especially as most Art Courses require a portfolio and it would be extremely difficult for any student to complete an Art portfolio without the guidance of an Art Teacher. The portfolio for entry to Art College should be worked on in LC1 as there is little time in LC2. The portfolio must show the use of varied media and the talents of the student. There should be approximately 20 mounted pieces and a sketch book of work.

Art is a requirement for the following third level courses:

- Visual Communication (Waterford IT) (Art or DCG O3/H5)
- NCAD - Art and Design (Common Entry); Fine Art; Design or Fine Art & Education - Second Level Teaching; Textiles & Surface design & Jewellery & Objects; Graphic Design and Moving Image Design; Fashion Design; Product Design; Illustration; Interaction Design (Portfolio and an O6/H7 in Art, 3rd Language or DCG); Visual Culture (an O6/H7 in art, 3rd Language or DCG).
- Animation; Design – Common Entry, Fashion with Promotion; Graphic and Digital Design, (Letterkenny IT) (Art or Graphic Design O6/H7 or Portfolio).
- Product Design and Technology (UL) (O3/H7 in Maths and O4/H7 in Applied Mathematics, Physics, Chemistry, Physics with Chemistry, Engineering, Design & Communication Graphics/Technical Drawing, Technology, Construction Studies, Agricultural Science, Biology or Computer Science, plus a portfolio (not LC Art)).
- Architectural technology (TU (CITY CAMPUS)) (H4 in one of Art, Construction Studies, Design & Communication Graphics, Engineering or Technology).
- Architecture - Interior Architecture; Fashion Design; Interior Design; (Griffith College Dublin) Maths O6/H7 Or O6/H7 Art or Design & Communications Graphics)
- Some schools of Architecture recommend Art and can even prefer it to the study of DCG. An art based portfolio is required for Architecture in University of Limerick, a suitability test and interview may be required for Architecture in TU (CITY CAMPUS).

Art is useful for careers in:

Art is a highly versatile subject, which prepares pupils for a wide range of careers such as Marketing And Design in the Industrial, Commercial and Advertising Areas; Media Work in T.V. and Video Design Production; Fashion Design and Industry; Craft Businesses; Product Design; Architecture; Florist; Graphic Design; Occupational Therapist; Town and County Planning; Environmental Design; Teacher of Art; Marketing Merchandiser; Gallery and Museum Work; Interior Designer; Photographer.

Biology is 'The Study of Life' in all its variety of forms. The human race shares this planet with one and a half million species of animals and plants, many of which are essential for our survival as a species. It follows, therefore, that knowledge of the science of biology is essential for an understanding of human life and the living environment around us. Through the study of biology students employ the processes of science in their investigations and explore the diversity of life and the inter-relationship between organisms and their environment. Students develop an understanding and knowledge of the unit of life – the cell – whose structures and processes are shared by all living organisms and, in so doing, gain an insight into the uniqueness, function and role of organisms, including themselves. In addition, they become aware of the use by humans of other living organisms and their products to enhance human health and the human environment and make informed evaluations about contemporary biological issues

The syllabus is composed of science for the enquiring mind or pure science, which constitutes approximately 70% of the syllabus, and the technological, political, social and economic aspects of biology, which constitutes the remaining 30%. In the course of their studies, students undertake a range of practical work, laboratory work and fieldwork. Students carry out these activities over the duration of the course. A record of this work is retained.

The syllabus consists of three units:

Unit One: Biology - The Study of Life

Unit Two: The Cell

Unit Three: The Organism.

Biology is required for the following third level courses:

Biology as a life science is a ground level subject which leads directly to many 'Bio' orientated 3rd level courses such as Medicine, Veterinary Science, Dentistry, Biochemistry, Microbiology, Food Technology, Nursing and Beauty Therapy.

A H4 in Biology is required for entry to Genetics (UCC); a H4 in Biology and a H4 in one of Physics, Chemistry, Physics/Chemistry is required for entry to Human Health & Disease (TCD), for Veterinary Medicine (UCD) a H5 in chemistry is required and Biology at Leaving Certificate, though not required, is strongly recommended by UCD. In Letterkenny IT, a H5 in Biology is required for Health Science with Dietetics Studies, Health Science with Occupational Studies and Health Science with Physiotherapy Studies. It meets to requirements for "a science subject" for approximately 197 further courses.

Biology is useful for careers in:

Agriculture; Horticulture; Animal Trainer; Ambulance Driver; Biochemist; Biologist; Science Teacher; Dental Hygienist; Dentist; Dietician; Doctor; Nurse; Farmer; Fisherman; Food Science Technician; Forester; Laboratory Assistant; Marine Biologist; Naval Officer; medical/Laboratory Technician; Occupational Therapist; Radiographer; Pharmacist; Psychologist; Speech and language Therapist; Veterinary Surgeon; Optician; Physiotherapist; Bio-Engineering; Conservation Worker; Environmental Protection Officer; the Brewing industry.

Business is concerned with the understanding of the environment in which business operates in Ireland and in the wider world. Business touches everyone's life whether we know it or not. One cannot turn on the television, listen to the radio or read a newspaper without coming into contact with the subject. How much better it would be to have a proper background in the subject before one stumbles across it in real life, in the workplace, through dealings with financial institutions or paying tax. Business will clarify in our minds many of the terms or buzz words which we are constantly exposed to and yet unclear of, for example "Enterprise", "Marketing" and "Return on investment". The course aims to create an awareness of the importance of enterprise and to generate a positive and ethical attitude in both business and personal life. The syllabus is broken down into three sections:

Section A: People in business (the entrepreneurs, the managers, the workers and the consumers)

Section B: Enterprise (taking business ideas and developing them into effective business enterprises)

Section C: Environment (how business relates to and connects with the environment, both domestic and international)

Business is assessed through a written terminal examination. This examination contains a variety of questioning techniques and styles. At Ordinary Level students are required to recall and demonstrate a knowledge and understanding of the syllabus content. However, at Higher level candidates will be required to demonstrate a greater depth of knowledge and understanding of the concepts and issues than Ordinary level candidates, as well as a greater proficiency in applications and analysis; apply the business terms, concepts and theories to address problems and issues; select, organise, interpret and use information supplied; evaluate evidence, make reasoned judgements and present conclusions accurately and appropriately. The examination questions centre on the application of the legislation as opposed to a knowledge of it.

Business is required for the following third level courses:

Business forms an intricate part of any third level business course. However it is not a requirement for entry to any particular course at third level.

Business is useful for careers in:

Business Industry; Banking; Accountancy; Administration; Clerical Work; Insurance; Stockbroker; Law; Customs and Excise; Management; Marketing; Sales; Stock Control; Credit Control; Taxation; Public Relations; and Teaching.

The study of Chemistry in senior cycle is desirable not only for those who wish to pursue a career in science, or in careers allied to science, but also for those who wish to gain a deeper understanding of the world around them. Chemistry is very much the central foundation science subject, which makes it ideal to pair with Physics, Applied Math's or Biology. Indeed, students of third level Medical courses are advised to choose both Physics and Biology to partner their Chemistry choice.

The Chemistry syllabus features assessment of practical work and industrial case studies with a particular emphasis on environmental control. It consists of a core and options (outlined below). Each option is an expansion of material that is contained in the core. Practical work is an integral part of the study of chemistry, and there are a number of mandatory experiments (21 for Ordinary Level and 28 for Higher Level). An adequate record of practical work must be retained for the period of the course, but it is assessed through the medium of the written examination paper. The syllabus consists of approximately 70% pure chemistry; the remaining 30% deals with the social and applied aspects of chemistry.

Core Units include: Periodic Table and Atomic Structure; Chemical Bonding; Stoichiometry, Formulas and Equations; Volumetric Analysis; Fuels and Heats of Reaction; Rates of Reaction; Organic Chemistry; Chemical Equilibrium; Environmental Chemistry: Water;

In addition, the options are: For Ordinary Level students to choose ONE from options 1A, 1B, 2A and 2B, while for Higher Level students to choose between Option 1 and Option 2 in their entirety:

Option 1a: Additional Industrial Chemistry;

Option 1b: Atmospheric Chemistry;

Option 2a: Materials;

Option 2b: Additional Electrochemistry and the Extraction of Metals;

Chemistry is required for the following third level courses:

Not only is the place of chemistry central to most courses in Natural Sciences offered in third level education, but it is also an essential element in the study of Medicine, Dentistry, Veterinary Science, Physiotherapy, Engineering, Agricultural Science, Nursing, Pharmacy, Medical Laboratory Technology and numerous technician courses. It is a requirement for entry to 7 courses and meets the requirement for a science subject for a further 194 courses. These include:

- Human Nutrition and Dietetics (TU (CITY CAMPUS)) (H4 in Chemistry)
- Veterinary Medicine (UCD) (H5 in Chemistry. Biology at Leaving Certificate is not required but it is strongly recommended).
- Dentistry and Medicine (UCC) (H4 in Chemistry and either Physics or Biology)
- Pharmacy (UCC) (H5 in Chemistry and H4 in either Physics or Biology)
- Medical and Health Sciences (UCC) (H4 in Chemistry and O6/H7 Physics, Biology or Agricultural Science)
- Pharmacy (TCD) (H5 Chemistry and H4 in one of Physics, Biology, Mathematics, Applied Mathematics, Geography, Agricultural Science or Computer Science).
- Pharmacy (RCSI) (H5 Chemistry)

Chemistry is useful for careers in:

Agriculture; Archaeologist; Architect; Brewing Technologist; Chemist; Chemistry teacher; Dairy Scientist; Dental Craftsman; Dental Hygienist; Dental Surgeon; Dietician; Doctor; Engineering, particularly Chemical Engineering; Food Science Technologist; Industrial Chemist; Medical Laboratory Technician; Nurse, Optician, Pharmacist; Psychotherapist; Pilot; Polymer Scientist; Radiographer; Speech and Language Therapist; Forensic Science; Photographic Processing; Cosmetic Science; Quality Control and Biotechnology; Fuel Technologist; Veterinary Surgeon.

CONSTRUCTION STUDIES Molloy	Ms O'Neill / Mr Reddin / Mr
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The main focus of the Construction Studies course is on the domestic house but it also ranges from the construction of sports arena to skyscrapers. It is a practical course in which the student is given the opportunity to achieve 50% of their Leaving Certificate exam result during their Leaving Certificate year in a project and a practical exam. The other 50% is assessed in a written exam in June.

You will study the historical development of buildings; the simple aesthetic principles related to the appearance of buildings; elements of the built environment; controls over the built environment; how to obtain planning permission, choose a site, purchase a house, get a mortgage, and insurance; the role of the construction industry in the national economy; occupations in the industry; drawings and documents used in the construction process; use of scales, standard symbols and notation; preparation of dimensional drawings using instruments; freehand sketches of conventional details; site investigation information required and typical processes; conservation orders for trees and buildings; office and storage accommodation for a typical site; structural principles of simple forms of construction; problems associated with exposure of structures tot

eh elements; safely precautions on site- fire tests on building material and structures; and principles of building regulations; building foundations; choose material for internal and external walls; how sound, light and heat affect the design of buildings; how to install electricity and plumb your home; how to build an extension; calculate a U-value; how to survey a piece of land for construction; and how to convert your attic.

The assessment of the syllabus is broken into three components:

Task	%	Time	Example
Project	25%	May	A model house, a piece of furniture
Practical	25%	May	Materials - cutting, shaping, making a product using wood
Written Exam	50%	June	Answer 5 out of 10 Questions

Construction Studies is required for the following third level courses:

While Construction Studies is not a sole requirement for any course, it can meet the entry requirements for approximately 13 courses. The following is an illustrative list:

- Architectural Technology (TU (CITY CAMPUS))- (H4 in Art, Construction Studies, DCG, Engineering or Technology).
- Aeronautical Engineering; Electronic & Computer Engineering; Chemical and Biochemical Engineering (UL)- (H4 in Mathematics and O6/H7 in one of Applied Maths, Physics, Chemistry, Physics with Chemistry, Engineering, DCG, Technology, Biology, Agricultural Science, Construction Studies).
- Technology Management; Materials & Engineering Technology with Teacher Education; Materials & Architectural Technology with Teacher Education; Construction Management & Engineering (UL)- (O3/ H7 in Mathematics and O4/H7 grade in Applied Mathematics, Physics, Chemistry, Physics with Chemistry, Engineering, Design and Communication Graphics/Technical Drawing, Technology, Construction Studies, Agricultural Science, or Biology)
- Design Graphics and Construction Education at Letterfrack (GMIT)- (H5 in DCG or Construction Studies).
- Product Design (Maynooth University). O6/H7 in one of Agricultural Science, Biology, Chemistry, Physics, Physics with Chemistry, Engineering, Technology, Construction Studies or Design and Communication Graphics) and O3/H7 Mathematics
- Product Design (NCAD) O6/H7 in A third language or Art or DCG. But the O6/H7 Maths requirement can also be met by one of the following subjects at Grade H7/06 or Higher in Applied Mathematics, Physics, Chemistry, Physics with Chemistry, Engineering, Construction Studies, Agricultural Science, Technical Drawing, Biology.

Construction Studies is useful for careers in:

Auctioneering; Engineering; Construction Industry; Interior Design; Architecture; Quantity Surveyor; Town Planner; Construction Teacher; Property Development; Bricklayer; Decorator; Sheet Metal Worker; Carpenter; Plasterer; Welder; Electrician; Plumber; Machine Operator; Stone Cutter; Slate/Roof Tyler; Tool Maker; Glazier; Floor Tiler; Heating and Ventilation Technician; Firefighter; Insurance Claims.

DESIGN AND COMMUNICATION GRAPHICS (Technical Graphics) Reddin
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Ms O'Neill / Mr

Design and Communication Graphics is the graphic language of Technology. When Architects, Engineers and Interior Designers, for example, want to communicate their ideas or designs, they use Technical Drawing. It has its own set of rules and regulations that govern how it is to be used, which are common throughout the world. It is therefore a truly universal language. Design and Communication Graphics is distinguished from other forms of drawings because it requires accuracy and precision. DCG is an educational experience in the broadest sense as it provides students with a body of knowledge and develops their intellect and creative abilities in topics that are appropriate and meaningful in a technological world.

This programme is intended to develop the creative thinking and problem solving abilities of students. The Design and Communication Graphics course makes a unique contribution to cognitive and practical skills development. These skills include graphicacy/graphic communication, creative problem solving, spatial abilities/visualisation, design capabilities, computer graphics and CAD modelling. The creative and decision-making capabilities of students in the activities associated with design are developed through three principal areas of study: design and communication graphics, plane and descriptive geometries, and applied graphics.

There are two assessment components:

1. A student assignment (40% of the examination marks, of which CAD will form a component)
2. A terminal examination paper (60% of the examination marks)

Design and Communication Graphics is required for the following third level courses:

It is not a sole requirement for any course, but it can meet the entry requirements approximately 40 courses - The following is again an illustrative list:

- Design- Visual Communication (Waterford IT) (Art or DCG: O3/H5)
- NCAD - Art and Design (Common Entry); Design or Fine Art & Education - Second Level Teaching; Textiles & Surface Design & Jewellery & Objects; Fashion Design; Product Design; Illustration; Interaction Design (Portfolio and an O6/H7 in Art, 3rd Language or DCG); Visual Culture (an O6/H7 in art, 3rd Language or DCG).
- Animation; Fashion with Promotion; Graphic and Digital Design, (Letterkenny IT) (Art or Graphic Design O6/H7 or Portfolio). Design – Common Entry (Letterkenny IT) (portfolio if no LC Art presented)
- Product Design and Technology (UL) (O3/H7 in Mathematics and O4/H7 in any one of the following: Applied Mathematics, Physics, Chemistry, Physics/Chemistry, Engineering, DCG, Technology, Construction Studies, Agricultural Science, Biology, Computer Science.).
- Architectural technology (TU (CITY CAMPUS)) (H4 in one of Art, Construction Studies, DCG, Engineering or Technology).
- Architecture - Interior Architecture; Fashion Design; Interior Design; (Griffith College Dublin) Maths F2/O6/H7 Or O6/H7 Art or DCG)
- Aeronautical Engineering; Common Entry Engineering; Electronic & Computer Engineering (UL)- (H4 in Mathematics and O6/H7 in one of Applied Maths, Physics, Chemistry, Physics with Chemistry, Engineering, DCG, Technology, Biology, Agricultural Science, Construction Studies).
- Technology Management; Materials & Engineering Technology with Teacher Education; Materials & Architectural Technology with Teacher Education; Construction Management & Engineering (UL)- (O3/H7 in Mathematics and O4/H7 grade in Applied Mathematics, Physics, Chemistry, Physics with Chemistry, Engineering, DCG, Technology, Construction Studies, Agricultural Science, or Biology)
- Chemical and Biochemical Engineering (UL)- (H4 in Mathematics and O6/H7 Applied Maths, Physics, Chemistry, Physics with Chemistry, DCG, Engineering, Technology, Agricultural Science, or Biology).
- Product Design (Maynooth University). O6/H7 in one of Agricultural Science, Biology, Chemistry, Physics, Physics with Chemistry, Engineering, Technology, Construction Studies or DCG) and O3/H7 Mathematics
- Science with Nanotechnology; Physics with Medical Physics & Bioengineering; Physics Technology (TU (CITY CAMPUS) – (Maths O3/H7 and H4 in one of: Physics, Chemistry, Physics/Chemistry, Biology, Mathematics, Applied Mathematics, Agricultural Science, Engineering, Technical Drawing, Technology or DCG).
- Design & Technology Education at Letterfrack (GMIT)- (H5 in DCG or Construction Studies).

Design and Communication Graphics is useful for careers in:

Design and Communication Graphics may be contributory towards a variety of careers, which might include, Civil and Structural Engineering; Interior Design; Architecture; Building Services; Teaching; Aircraft Technician; Industrial Design; Motor Mechanic; Town Planner; Industrial Engineer; Apprenticeships; Structural Design; Mechanical Engineer; Carpenter; Bricklayer; and Printing.

French is the language of diplomatic circles and high finance today. It is one of the main working languages of the UN and the EU. The Leaving Certificate syllabus enables pupils to develop a high competency in the language by fostering the four language skills- reading, writing, speaking and listening. French provides students with the knowledge of the grammatical workings of the language, which will assist them in further study whether for academic, business or leisure purposes. It offers insights into the culture and civilization of France and encourages an openness of mind to the customs and culture of other people.

The Leaving Certificate examination at both Higher and Ordinary Levels consists of the same component, with different mark allocations as follows:

Higher Level

Speaking (oral examination) 25%

Listening comprehension 20%

Reading comprehension 30%

Writing 25%

Ordinary Level

Speaking (oral examination) 20%

Listening comprehension 25%

Reading comprehension 40%

Writing 15% (tests of written production, letter writing etc.)

A Language is required for the following third level courses:

Let's start by clearing up one misconception- You do not need a foreign language for all third level studies.

The National University of Ireland requires a pass in a third language for entry to almost every course in the faculties of Business, Arts, Law, Medicine, Architecture, Social Science, Veterinary, Physiotherapy, radiography, Sports Performance - University College Dublin, NUI Galway, RCSI, NCAD, University College Cork and Maynooth University. The exceptions are- All nursing courses (all colleges); and All Engineering and some Science programmes; Business and Law courses at Maynooth University and the NCAD will accept Art or DCG instead of a third language.

You also need a third language to become an Army, Navy or Air Corps cadet.

Students who have language exemptions (i.e. due to hearing problems or dyslexia) are also exempt from this requirement at third level and in the Defence Forces. Trinity College in Dublin and the University of Limerick accept Irish as fulfilling its second-language requirement. Dublin City University and the Institutes of Technology require a continental language only if the course involves its study.

French is required for entry to 9 courses in the CAO at the moment. These include:

- Arts with French (Maynooth University)- H5 French
- Arts with French (UL) – H4 French
- Commerce International with French (NUIG) - H3 in French
- Business Studies with French; French; Law and French; (TCD) H3 French
- Law & French; Commerce International with French (UCC) H3 in French
- Global Business – France (DCU) Minimum of O4 or H6 in Mathematics and minimum of H4 in French
- Arts (UCD) – UCD recommend that you study French, only if you have at least a H4 French
- European Studies (UL) – H4 grade in a language other than English. Students wishing to take French, Spanish (advanced) or German (advanced) must hold a minimum of a H4 grade in the appropriate language.
- Applied languages (UL)- Grade H3 in French or German or Irish or Spanish.
- Law Plus (UL) - students wishing to take a language option must have a H4 grade in that language with the exception of Japanese, beginners Spanish or beginners German, where a H4 grade in a language other than English is required.

- Business International; Business (UL) - Students wishing to take a language option must have a H4 in that language, with the exception of Japanese or Beginners Spanish where a H4 in a language other than English is required.
- Arts (French) (WIT) - It is recommended that applicants choosing French, German or Irish have a H5 in that language.
- International Business and Languages- French, Languages and International Tourism- French; (TU (CITY CAMPUS)) - H4 in one of Chinese, French, German, Irish, Italian or Spanish
- Commerce International French (UCD) - H4 in LC French (or equivalent) to take any French language combinations.
- Law with French Law; BCL/Maîtrise (UCD) - H3 French
- Applied language and Translation Studies; Arts - International Languages; (DCU) - Minimum of H4 in French or German or Spanish
- European Studies (TCD) - H4 in two of French, German, Italian, Polish, Russian, Spanish (H3 in the case of French and German, and H4 in the case of Spanish if non-beginner). Students who have only one language (other than English or Irish) may also be admitted with H3 in the language they wish to study.
- Middle Eastern & European Languages & Cultures (TCD)- H3 in one of French, German, Greek, Italian, Latin, Russian, Spanish, Arabic or Hebrew Studies.

In addition, the Garda require English and Irish (O6) or English or Irish and another Language. So if you are exempt from Irish you will need to study another language.

If you were born outside of Ireland and have an **exemption from Irish**, you will **need to study French or Spanish (or another language at Leaving Certificate level)** to meet the second language requirement for entry to **TCD and UL**.

French is useful for careers in:

Flight Attendant; Air Traffic Controller; Au Pair; Bilingual Secretary; Chef; Hotel Manager; Receptionist; Marketing; Export Careers; Interpreter; Translator; International Driver; Pilot; Travel Agency Clerk; Waiter; Journalist; Telemarketing; Department of Foreign Affairs; European Union, United Nations; Defence Forces.

GEOGRAPHY Masterson	Ms Howley / Ms Larkin / Mr
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Geography is concerned with the study of people and their environment. A study of geography will help you to develop an understanding of your physical and human surroundings. It examines the changing interrelationships between the physical and human worlds. Through a study of geography, you will develop geographical skills that will help you to make informed judgements about issues at local, national, and international levels. The syllabus is wide and varied, ensuring plenty to interest you. If you enjoy drawing or are good at numbers or like to interpret graphs and charts, then you will be able to develop these skills as well as gain knowledge of the units outlined below.

The course is broken into three Core units common to Higher and Ordinary Level, an additional elective unit common to both levels and a further optional unit in Higher Level as follows:

- **Core Unit 1** Patterns and processes in the physical environment
- **Core Unit 2** Regional geography
- **Core Unit 3** Geographical Investigation and Skills
- **Elective Unit 4** Patterns and processes in economic activities
- **Elective Unit 5** Patterns and processes in the human environment
- **Optional Unit 6** Global interdependence
- **Optional Unit 7** Geocology
- **Optional Unit 8** Culture and identity

CORE UNITS Common to both levels

Choose ONE Elective Unit Common to both levels
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Higher Level students only choose ONE Optional Unit

- Optional Unit 9 The atmosphere—ocean environment

Assessment will take the form of a terminal written examination and a report on a geographical investigation.
-Written examination 80%. - A report on the geographical investigation 20%.

The written examination consists of questions requiring short answers and multi-part questions requiring more developed answers. Longer essay-style discursive answers are required only in the assessment of the optional units. The report on the geographical investigation will be assessed outside of the terminal written examination.

Geography is required for the following third level courses:

Geography is not a sole requirement for any course; it can be useful in many courses. It meets entry for 7 courses:

- Pharmacy (TCD) - H5 Chemistry and H4 in Physics, Biology, Mathematics, Applied Mathematics, Geography or Agricultural Science
- Geography and Geoscience, Biological & Biomedical Sciences, Chemical Sciences, and Physical Sciences (TCD) (H4 In two of Physics, Chemistry, Biology, Mathematics, Physics/Chemistry, Geology, Geography, Applied Mathematics or Agricultural Science)
- Science (UCD)- Min O3/H6 in Applied Mathematics or Geography may be used instead of a laboratory science subject.
- Biological and Geographical Sciences (Maynooth University)- O6/H7 Science subject (one of Agricultural Science, Biology, Chemistry, Computer Science, Geography, Physics or Physics/Chemistry)

Other courses in the area of Social Science, Travel and Tourism, Management benefit from the study of Geography. It may also be taken as a teaching subject in the UL PE teaching course, or as part of many Arts Degrees.

Geography is useful for careers in:

Civil Engineering; Construction; Planning; Tourism; Archaeology; Meteorology; Environmental Protection; Surveying; Landscape; Architecture; Agriculture; Forestry; Transport and Communications; Marketing; Leisure Industry; Local Government; Conservation Work; Air Traffic Controller; Marine Officer; Developmental Work Abroad; International Driver; Naval Cadet; Pilot; Quantity Surveyor; Education; Distributive Trades; Mining and Energy Industries;

HISTORY Masterson	Ms Farrell / Mr Egan / Mr
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Studying history will develop in you an appreciation of the society in which you live and of other societies, both past and present. You will also develop an awareness of your historical inheritance and gain insights into your own identity and tradition. You will develop understanding about different concepts that are relevant to life today, such as democracy and human rights, power and authority, and conflict and reconciliation. History is unique in that it is the only subject that investigates how aspects of human life and human institutions have undergone change over time. You will learn about how such change has taken place in Irish history and the history of Europe and the wider world. Your study will deal with political, social, economic, cultural, religious and scientific history.

Much of popular culture, whether in films, literature, or theatre, draws on history for inspiration. Many of the issues that affect the planet on a daily basis have their roots in history also, and knowing this history helps us to understand them. History also helps to deepen our understanding of events and people, as it gives us context and a sense of perspective. This may explain why history books and films are so popular nowadays with people who did not study the subject in school, but who now enjoy it as a hobby and can see its relevance. You will

encounter many issues and events, both in Irish history and in the history of Europe and the wider world, which have helped to shape the world we live in. You will also learn about the role of many interesting key personalities, from various walks of life, in shaping the past. You will develop analytical skills and the ability to select relevant information, making this a useful subject to have studied if you decide to take Arts or a Law Degree.

The new Leaving Certificate History Syllabus was introduced in 2004, and its assessment includes the following:

- Research study pre-submitted (can be of local/national and/or international significance) (20%)
- A terminal Examination which includes:
 - A Study of Documentary Evidence (20%)
 - General Questions (60%)

The terminal examination explores areas from the Later Modern field of study (4 topics to be studied; two from Irish history, and two from Europe and the Wider World). Each topic is studied from a range of perspectives. For a majority of topics, this involves the study of the following aspects of a topic: politics and administration; society and economy; culture, religion and science. In addition each topic has three associated case studies, which involves an in-depth investigation of a particularly significant or representative aspect of an element of the topic; and a list of key personalities and key concepts. Study includes the following topics:

Irish history, 1815-1993

1. The pursuit of sovereignty and the impact of partition, 1912-1949
2. Politics and society in Northern Ireland, 1949-1993

History of Europe and the wider world, 1815-1992

1. Dictatorship and democracy, 1920-1945
2. The United States and the world, 1945-1989

History is useful for careers in:

Politics; Journalism; Town Planning; Economics; Local Government; Social Work; Sociology; Archaeology; Barrister; Civil Servant; Guide; History Teacher; Law Clerk; Museum Work; Researcher; Solicitor; Trade union Official; Prison Service; Probation Officer; Garda; Writer; Tourism; Librarian.

MUSIC Hogan	Ms
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Music is in its own right a way of “knowing” that also encourages the cognitive processes used in other subject areas. It is an immensely useful subject. The new syllabus - first examined in 1999 - continues to emphasize the integration of the three activity areas introduced at Junior Cycle level:

1. *Performance* (25%)

- students may perform individually or as a group (Senior choir, band etc). The standard required is that of a student who has been performing in a school context for 5 years.

2. *Listening* (25%) - includes:

- four prescribed works of different historical context
- Irish music
- general aural skills, i.e. rhythm, melody, vocal & instrumental timbres

3. *Composition* (25%) - includes:

- melodic & harmonic composition
- melody writing
- adding chord symbols (e.g. guitar chords) to melody
- adding bass notes (base line) to melody
- exploring various styles of writing from popular to ‘classical’

4. *Remaining* 25%

- students may undertake any one of the above activities as a “higher elective” e.g. performance could total 50 % of total. (Ordinary level students choose one of the three activities to represent 50% of their work with no extra work, while Higher Level students undertake a Higher Level Elective in one of the three activities that best suits their talents).

The course was designed with the students in mind, so that a package of study areas can be selected to suit the strengths and interests of individual students. The core activity areas of the course include Rock Music (prescribed works by The Beatles / Queen) and Music Technology. A core (up to 50%) of the course can be undertaken in performance- singing, playing an instrument, accompaniment, conductor. However, is it not necessary for the Leaving Certificate to have a musical instrument, as 25% of the practical can be through the medium of computers- inputting music and performing three edits and printing out the finished product.

Music is required for the following third level courses:

While Leaving Certificate music is not a requirement to study all Music courses at third level, particular standards must be achieved, as there is usually a theory (music reading) and practical examination for entry. Those applying would be expected to have reached Grade 7 in a particular instrument. This is an illustrative list of the mix of requirements for music courses:

- Arts (with Music); Music (Maynooth University) H5 Music
- Post Primary Teacher Education - Religious Education & Music (DCU) - minimum of H4 in Music or equivalent. Applicants must take Music Aural and Performance tests.
- Theology and Arts (Pontifical University, St. Pat’s College Maynooth) - Music Technology - O3/H7 Music recommended, Music - H5 required.
- Arts (with Music) (UCD) - Strongly recommend H4 Music, or Grade 5 ABRSM Music Theory.
- Arts with Music; Music (UCC) - Applicants are required to pass a special music test
- Music - Popular Music - Electric Bass Guitar; Electric Guitar; Drums; Keyboard, Voice; at CIT Cork School of Music (CIT) – Entrance test
- Music; Commercial Modern Music (TU (CITY CAMPUS)) - Attend an audition/interview
- Applied Music (Dundalk IT)- Entrance test.
- Music; Music (Arts) (TCD) - Though desirable, formal musical training is not a prerequisite for entry, but candidates should have a good ear and the ability to read and notate music to a rudimentary level. The most important musical qualification is a good ear. You will be called for an entrance test on 1 April 2017 (provisional date). This will include a simple harmony paper, an ear test, a paper on general musical knowledge and background and an essay paper. On the basis of the entrance examination results, applicants may be called to attend an interview at the end of April/beginning of May, before final selections are made. You are not required to perform at interview.
- Music (WIT) - attend for written and aural musical tests and to show a performance standard achievement with a musical instrument equivalent to grade 5 of a recognised music examining body.

Music is useful for careers in:

Media work or studies; Teaching; Sound Engineering; Public Relations; Communications; Performance; Entertainment Industry; Speech Therapy; Film and Television Director; Occupational Therapist; Actor; Aerobics; Disc Jockey; Folklore; Instrument maker; and music at third level.

PHYSICS Scully	Mr
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Physics describes the laws and forces governing natural phenomena, which include heat, light, electricity, and magnetism. It uses maths and equations to describe and predict events and phenomena. It is of key importance in technology and particularly relevant for those interested in specialising in most branches of engineering. It can be challenging but it can also be rewarding. Understanding a little more about the often-surprising ways of the physical world can make the world seem a more fascinating and complex place. How does the electric motor work? What evidence do we have that the Universe is expanding (the Big Bang)?

Why is it that sound can go around corners but light cannot? How can we measure the power of an athlete? The answer to these questions and many more can be found in the study of Physics.

These are the main areas of study include:

1. Mechanics: Force; Motion; Gravity; Density and Pressure; Movement; Equilibrium; Energy.
2. Temperature: Thermometric properties;
3. Heat: Quantity and Heat Transfer
4. Waves: Wave Properties; Wave Phenomena; Doppler effect;
5. Vibration and Sound: Wave nature of sound; Sound intensity level; Resonance; Vibrations.
6. Light: Reflection; Refraction; Wave nature of light;
7. Electricity and Magnetism; Charges; Electric Field; Capacitance; Electric Current; Electromagnetism.
8. Modern Physics: The Electron; The Nucleus.

Higher Level only

9. Applied Electricity

The syllabus is composed of pure science which constitutes approximately 70% of the syllabus, and the technological, political, social and economic aspects of physics, which constitutes the remaining 30%. In the course of their studies, students undertake a range of practical work, laboratory work and fieldwork. Students carry out these activities over the duration of the course. A record of this work is retained and assessed in the written paper. Ordinary level consists of a defined set of concepts (in units 1-8 above). Higher level consists of the Ordinary level concepts, additional concepts, and an additional unit on Applied Electricity.

Physics is required for the following third level courses:

Physics meets the science subject requirement for medical, science, engineering, electronics and computer courses. In most engineering courses, you will find a high physics content, while some paramedical careers will involve the study of physics e.g. radiotherapy, physiotherapy etc. In addition, anyone considering a career or course in electronics would be very much encouraged to do physics. Physics is a specific requirement for Theoretical Physics in Trinity College Dublin (H3 In Mathematics and Physics). It meets to requirements for “a science subject” for approximately 197 further courses.

Studying leaving certificate physics would be advantageous for any student intending to do science, engineering, medicine, dentistry, or veterinary science at third level.

Physics is useful for careers in:

Architecture; Astronomy; Biophysicist; Computer Careers; Dentist; Doctor; Engineer, especially electrical and electronic, Geophysicist; Health Inspector; Medical Laboratory Technician; Meteorologist; Naval Service; Nurse; Optician; Pharmacist; Physicist; Physics Teacher; Photographic Technician; Pilot; Radiographer; Science Laboratory Technician; Telecommunications; various trade apprenticeships; Heating and Ventilation Technicians; Forensics; Communications; Information Technology. Indeed unemployed or bored physicists are very scarce!

Note: “The physics syllabus does not require Higher level mathematics. Higher level physics may include some of the optional work of Ordinary level mathematics” (syllabus)- However, there are aspects of Arithmetic, Algebra, Geometry and Trigonometry, Vectors and Graphs involved in the study of Physics. It is therefore recommended that students studying Physics at Leaving Certificate level have attained either an A in Ordinary Level Maths, or at least a D in Higher Level Maths; and, in addition, have attained at least a D in Higher Level Science in the Junior Cycle.

Politics and Society was examined for the first time at the 2018 Leaving Certificate. This subject was introduced in September 2016 in 41 schools participating in an initial subject pilot. Leaving Certificate Politics and Society aims to develop the learner's capacity to engage in reflective and active citizenship, informed by the insights and skills of social and political sciences. It examines topics of interest and concern to students and their world - power, decision-making, identity, conflict, gender justice, climate change, human rights, etc. Involves learning not just to understand the world, but in order to change it.

Politics and Society is organised in four strands, each structured around key concepts:

Strand 1 Power and decision-making

Strand 2 Active citizenship

Strand 3 Human rights and responsibilities

Strand 4 Globalisation and localization

Through these strands you will discuss of the local, national, European and global dimensions of the issues studied. You will explore the similarities and differences in social and political practices around the world; you will analyse and interpret qualitative and quantitative social and political research data. You will take certain issues and look at them in your own local context, then also consider them in a broader context: through this you will engage in comparative study. In doing this subject you will develop your skills of discussion and debating and of analysing information; using these skills, you can come to conclusions.

Is there a link to other Leaving Certificate subjects? Yes – There is some overlap with Leaving Certificate Geography, History, Economics and Religious Education. Also supports and develops skills needed for LC English

Assessment:

Assessed in a similar way as LC History, Geography and R.E. – with 80% for the final written exam and 20% for a piece of work submitted during 6th year

Politics and Society is required for the following third level courses:

It is not a requirement for any course, but points are awarded for this subject at every University and Institute of Technology. The subject develops critical thinking skills needed in every third level course.

- Ability to understand the difference between opinion, reasoned judgement and fact
- Ability to distinguish between causes and consequences
- Ability to examine similarities and differences as the basis for comparing and contrasting
- Recognition of bias
- Motivation to seek out alternative perspectives and viewpoints
- Ability to evaluate different opinions

Politics and Society is useful for careers in:

Useful for study of politics, sociology, law, anthropology, philosophy, development studies, public administration, teaching, journalism, media studies, and many more.

The newest subject on offer is one of the oldest around, Religious Education. From the dawn of mankind, the first blossoming of self awareness of our ancestors there has been a reaching for and desire to understand the bigger picture. How people have sought to explain, interpret and guide themselves through this world toward the next is the area of study here. The course looks at World Religion and the major faiths. From earliest times, the experience of the spiritual and the human search for meaning have frequently found expression in a religious interpretation of life. The history of humanity has been indelibly marked by the contributions of religious traditions. In Ireland, Christianity is part of our rich cultural heritage and has played a significant role in shaping our vision of ourselves, our world, and our relationships with others. However, effective functioning in an increasingly complex culture demands that individuals have an understanding of a variety of religious traditions, and an appreciation of the richness of the major religious traditions encountered not just in Ireland, but in Europe and in the wider global context. The syllabus looks at Celtic Spirituality, the development of Christian thinking and Christian practice. It also looks at ethical issues and morality and the dividing line between the personal and the public, and church and the state. Lots of reading and interesting debate, a searching exam at the end. Religious Education helps us to grow in our understanding of society and of ourselves. It develops critical skills for examining values, morality and religion. It can raise the level of informed debate in society, in business and in the church.

The Leaving Certificate programme places particular emphasis on the preparation of students for the requirements of further education or training, for employment, and for their role as participative, enterprising citizens. They emphasise the importance of a spirit of inquiry, critical thinking, problem solving, self-reliance, initiative and enterprise. The study of Religious Education in the Leaving Certificate programme calls for the exploration of issues such as meaning and value, the nature of morality, the development and diversity of belief, the principles of a just society, and the implications of scientific progress.

Assessment

Students' personal faith commitment and/or affiliation to a particular religious grouping will not be subject to assessment for national certification

For the Leaving Certificate examination, the assessment procedure shall have two elements:

1. Coursework (20%)- In each year of the Leaving Certificate examination, list of titles for coursework is made available. Students must submit ONE piece of coursework.
2. Terminal written paper (80%)- At Ordinary and Higher levels, all sections of the course, apart from the sections designated for coursework, will appear on the examination paper. There are choices of questions in each section of the exam (Higher Level: Unit One, do 1 question from a choice of 2; in Unit Two do 2 questions from a choice of 3, and in Unit Three do 1 question from a choice of 4; Ordinary Level: Unit One, do 2 questions from a choice of 3; in Unit Two do 2 questions from a choice of 3, and in Unit Three do 1 question from a choice of 4). The higher level paper takes 2 and a half hours. The ordinary level paper takes 2 hours.

Religion is required for the following third level courses:

It is not a requirement for any course, but points are awarded for this subject at every University and Institute of Technology.

Religion is useful for careers in:

Religious education; Social Work, Religious Life and Priesthood; Work and Voluntary Agencies abroad; Youth Leadership; Charity Fund-Raising; Psychiatric Nursing; Religious Journalism, Publishing and Broadcasting; Archive Work and Librarianship; Church related Ministries; Philosopher; Theologian; Choirmaster or Organist.

SPANISH Egan	Ms Rasmussen / Mr
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In Spanish you will develop your reading, writing, oral and understanding skills. You will also learn about culture in Spain and other Spanish speaking countries. Spanish is one of the most widely spoken languages in the world; spoken in more than 20 countries, by over 200 million people. The general educational aims of foreign language teaching are:

1. to make it possible for pupils to take up job and further education opportunities, which may involve the use of Spanish (increasingly important in the context of the development of the E.U.)
2. to develop the pupils' capacity to engage in useful interactions in another language.
3. to give pupils an awareness of another culture.
4. to contribute to pupils' awareness of language as a system of communication
5. to develop an awareness of the grammatical structure of language.

Assessment

The Leaving Certificate examination at both Higher and Ordinary levels consists of the same component, with different mark allocations as follows:

Higher Level

Speaking (oral examination) 25%

Listening comprehension 20%

Reading comprehension 30%

Writing 25%

Ordinary Level

Speaking (oral examination) 20%

Listening comprehension 25%

Reading comprehension 40%

Writing 15% (tests of written production, letter writing etc.)

A Language is required for the following third level courses:

As mentioned under the French section, you do not need a foreign language for all third level studies.

The National University of Ireland requires a pass in a third language for entry to almost every course in the faculties of Business, Arts, Law, Medicine, Architecture, Social Science, Veterinary, Physiotherapy, radiography, Sports Performance - University College Dublin, NUI Galway, RCSI, NCAD, University College Cork and Maynooth University.

The exceptions are- All nursing courses (all colleges); and All Engineering and some Science programmes; Business and Law courses at Maynooth University and the NCAD will accept Art or DCG instead of a third language.

You also need a third language to become an Army, Navy or Air Corps cadet.

Students who have language exemptions (i.e. due to hearing problems or dyslexia) are also exempt from this requirement at third level and in the Defence Forces. Trinity College in Dublin and the University of Limerick accept Irish as fulfilling its second-language requirement. Dublin City University and the Institutes of Technology require a continental language only if the course involves its study.

Courses that require Spanish include:

- Global Business – Spain (DCU) H4 in Spanish
- Business Studies and Spanish (TCD) H3 Spanish
- Italian and a Modern Language (Irish, Russian or Spanish) (TCD)- Students wishing to combine two of Italian and Russian or Spanish are required to present at least one of the chosen languages at H4 or better. Irish at H4 also.
- Languages and International Tourism- Spanish (TU (CITY CAMPUS)) H4 in one of Chinese, French, German, Irish, Italian or Spanish

- Business International; Business (UL) - Students wishing to take a language option must have a H4 in that language, with the exception of Japanese or Beginners Spanish where a H4 in a language other than English is required.
- Applied languages (UL) - Grade H3 in French or German or Irish or Spanish.
- Law Plus (UL) - students wishing to take a language option must have a H4 grade in that language with the exception of Japanese, beginners Spanish or beginners German, where a H4 grade in a language other than English is required.
- Applied language and Translation Studies; Arts - International Languages; (DCU) - Minimum of H4 in French or German or Spanish
- European Studies (TCD) - H4 in two of French, German, Italian, Polish, Russian, Spanish (H3 in the case of French and German, and H4 in the case of Spanish if non-beginner). Students who have only one language (other than English or Irish) may also be admitted with H3 in the language they wish to study.
- Middle Eastern & European Languages & Cultures (TCD)- H3 in one of French, German, Greek, Italian, Latin, Russian, Spanish, Arabic or Hebrew Studies.
- European Studies (UL) – H4 grade in a language other than English. Students wishing to take French, Spanish (advanced) or German (advanced) must hold a minimum of a H4 grade in the appropriate language.
- International Business and Languages- Spanish, Languages and International Tourism- Spanish; (TU (CITY CAMPUS)) - H4 in one of Chinese, French, German, Irish, Italian or Spanish
- Commerce International Spanish (NUIG) - H4 in a modern European language other than Irish or English.

Spanish is useful for careers in:

Flight Attendant; Air Traffic Controller; Bilingual Secretary; Chef; Hotel Manager/receptionist; Marketing; Export Careers; Teacher; Interpreter; Translator; International Driver; Pilot; Travel Agency Clerk; Waiter; Journalist; Telemarketing; Department of Foreign Affairs; European Union, United Nations; Defence Forces; Clinical Speech.

Leaving Certificate Technology emphasises the use of knowledge, its practical application to real-life situations, and the interaction between thinking and doing. The course encourages practical activities and the production of artefacts and systems as solutions to identified problems or briefs. Students taking this course should develop their problem-solving skills and a sense of responsibility for their own learning, and become self-directed, creative and autonomous learners, thus laying the foundation for lifelong learning. Technology involves a study of:

- A Process of Design
- Project & Quality Management
- Materials and Production
- Communication and Graphic Media
- Information & Communications Technology
- Structures and Mechanisms
- Energy, Electricity and Electronics

In addition students study two optional modules from:

- Electronics and Control (Electrical Measurement, Components and Circuit Design, Power Supplies and Safety, Electric Motors, Assembly of Pre-designed Circuits, Logic Circuits, Counters and Sensors)
- Applied Control Systems (Robotics, Robotic Control, Control, Programmable Devices, Pneumatics)
- Information & Communication Technology (Computer Architecture, Data Communications, Computer Networks, Internet, Multimedia Design)
- Manufacturing Systems (Context of Manufacturing, Quality Management, Project management, Concurrent Engineering, Manufacturing Systems Design & Control)
- Materials Technology (Classification of Materials, Properties/Structure of Materials, Structure of Materials, Materials Processing, Skills Development, Quality Assurance, Production Techniques)

Assessment

There will be one examination paper at Ordinary level (2 hours) and one at Higher level (2.5 hours). In addition 50% of the assessment requires students to undertake a project based on a specified thematic brief and within stated parameters. The project involves the design and production of an artefact and an accompanying folder.

The project, which must be completed in school and be the unaided work of the student, should integrate the various elements of the study of technology. The folder should reflect all stages of the student's work from design to realisation, and should include an overall evaluation.

Technology is required for the following third level courses:

It is not a sole requirement for any course, but it can meet the entry requirements approximately 30 courses - The following is again an illustrative list:

- Product Design and Technology (UL) (O3/H7 in Mathematics and grade O4/H7 in any one of the following: Applied Mathematics, Physics, Chemistry, Physics with Chemistry, Engineering, Design & Communication Graphics/Technical Drawing, Technology, Construction Studies, Agricultural Science, Biology, Computer Science.).
- Architectural technology (TU (CITY CAMPUS)) (H4 in one of Art, Construction Studies, Design & Communication Graphics, Engineering or Technology).
- Aeronautical Engineering; Common Entry Engineering; Electronic & Computer Engineering (UL)- (H4 in Mathematics and O6/H7 in one of Applied Maths, Physics, Chemistry, Physics with Chemistry, Engineering, Design & Communication Graphics/ Technical Drawing, Technology, Biology, Agricultural Science, Construction Studies).

- Technology Management; Materials & Engineering Technology with Teacher Education; Materials & Architectural Technology with Teacher Education; Construction Management & Engineering (UL)- (O3/ H7 in Mathematics and O4/H7 grade in Applied Mathematics, Physics, Chemistry, Physics with Chemistry, Engineering, DCG, Technology, Construction Studies, Agricultural Science, or Biology)
- Chemical and Biochemical Engineering (UL)- (H4 in Mathematics and O6/H7 Applied Maths, Physics, Chemistry, Physics with Chemistry, DCG, Engineering, Technology, Agricultural Science, or Biology).
- Product Design (Maynooth University). O6/H7 in Agri Science, Biology, Chemistry, Physics, Physics/Chemistry, Engineering, Technology, Construction Studies or DGC and O3/H7 Mathematics
- Science with Nanotechnology; Physics with Medical Physics & Bioengineering; Physics with Energy & Environment; Physics Technology (TU (CITY CAMPUS)) – (Maths O3/H7 and H4 in one of: Physics, Chemistry, Physics & Chemistry, Biology, Mathematics, Applied Mathematics, Agricultural Science, Engineering, Technical Drawing, Technology or Design & Communication Graphics).
- Engineering (UCC) – (H4 in Mathematics or Applied Mathematics (if the H4 is in Applied Maths, a H6 in Maths is also required); O6/H7 Laboratory Science subject (Biology, Chemistry, Physics, Physics with Chemistry (joint) or Agricultural Science) or Technology)
- Engineering (Maynooth University) – O6/H7a Science subject (i.e. Agricultural Science, Applied Mathematics, Biology, Chemistry, Physics, Physics with Chemistry or Technology) & H4 Mathematics.
- Biomedical Engineering; Civil Engineering; Electronic and Electrical Engineering; Electronic and Computer Engineering; Energy Systems Engineering; Mechanical Engineering; Undenominated Engineering (NUIG) - O6/H7 in a laboratory science subject (i.e. Chemistry, Physics, Biology, Physics with Chemistry (joint) or Agricultural Science) or Technology, and H4 Mathematics)
- Analytical Chemistry- Environmental Forensic and Pharmaceutical; Chemical Sciences with Medicinal Chemistry (TU (CITY CAMPUS)) - Maths O3/H7 and H4 in one of: Physics, Chemistry, Physics/chemistry, Biology or Technology.
- Clinical Measurement Science (TU (CITY CAMPUS)) - O3/H7 Maths and H4 in Mathematics, Applied Mathematics, Physics, Chemistry, Physics/Chemistry, Biology, Agri. Science, Engineering or Technology.
- Science General Entry (TU (CITY CAMPUS)) - Maths O3/H7 and H4 in one of Physics, Chemistry, Physics/chemistry, Biology, Agricultural Science, Engineering, Technology or Applied Mathematics.
- Project and Construction Management (NUIG) - O6/H7 in a laboratory science subject (i.e. Chemistry, Physics, Biology, Physics/Chemistry or Agricultural Science) or Technology, and O2/H6 Maths.
- Physics and Data Science (TU (City Campus))- At least H4 in one of: Applied Mathematics, Physics, Chemistry, Physics and Chemistry, Biology, Computer Science, Agricultural Science, Engineering, Technical Drawing, Technology or DCG.

Technology is useful for careers in:

Civil and Structural Engineering; Architecture; Building Services; Teaching; Aircraft Technician; Industrial Design; Motor Mechanic; Town Planner; Industrial Engineer; Apprenticeships; Structural Design; Mechanical Engineer; Carpenter; Bricklayer; Computer Careers; Engineer, especially Electrical and Electronic, Medical Laboratory Technician; Naval Service; Pilot; Radiographer; Science Laboratory Technician; Telecommunications; Heating and Ventilation Technicians; Forensics; Communications; Information Technology.

**LCVP
Cassidy**

Co-ordinator: Mr

The Leaving Certificate Vocational Programme (LCVP) is an intervention designed to enhance the vocational dimension of the Leaving Certificate (established). The LCVP combines the academic strengths of the Leaving Certificate (established) with a new and dynamic focus on self-directed learning, innovation and enterprise. This two-year programme aims to prepare young people for adult life by ensuring that they are educated in the broadest sense, with an ability to cope and thrive in an environment of rapid change.

Programme Requirements:

- At least five Leaving Certificate subjects, one of which must be Irish
- Two of the above subjects must be selected from one of the designated VSGs (below)
- Two Link Modules: Preparation for the World of Work and Enterprise Education
- A recognised course in a Modern European Language other than Irish or English

Vocational Subject Groupings (VSGs):

Two subjects are selected from one of the groupings below:

Eligible Subject.....	..if combined with one of the following:
Art	Accounting, Business, or DCG
Accounting	Agri Science, Art, Business, Construction Studies, Technology, DCG, or Music
Business	Agri Science, Accounting, Art, Construction Studies, Technology, DCG, or Music
Biology	Agri Science, Chemistry, or Physics
Chemistry	Agri Science, Biology, or Physics
Construction Studies	Accounting, Business, DCG, Technology or Physics
Design and Communication (DCG)	Accounting, Art, Business, Construction Studies, Technology or Physics
Physics	Agri Science, Biology, Chemistry, Construction Studies, or DCG
Music	Accounting or Business
Agricultural Science	Construction Studies, Technology, DCG, Chemistry, Physics, Biology, Accounting, Business
Technology	Construction Studies, DCG, Physics, Agricultural Science, Accounting, Business

Note; this list includes combinations for the available options at this school only. LCVP Combinations must be studied in this school, and not at additional out of school studies (DES regulation).

Assessment of the Link Modules:

LCVP Link Modules are assessed by Written Examination (40%) and by Portfolio of Coursework (60%).

The Written Examination (assessed in May) involves the following elements:

- ✓ assessing an Audio Visual Presentation,
- ✓ a Case Study (received in advance),
- ✓ General Questions (4 out of 6).

Students assemble the portfolio over the two years of the programme and it is assessed at the end of the final year of the Leaving Certificate. Portfolio items include:

- ✓ Curriculum Vitae,
- ✓ Career Investigation,
- ✓ Enterprise/Action Plan,
- ✓ Summary Report,
- ✓ Work Experience Report
- ✓ and a Recorded Interview.

Click on “*Students*” .

For subject options click on “*Useful tools*”, and then choose “*Minimum Subject Requirements*”, and then “*Leaving Certificate Subjects*”

In the box labelled “*Show me 3rd level courses which may to may not require the following subject*”, scroll down to the subject you wish to investigate and press search

To view courses that require the subject click on the box labelled “**Definitely requires: xxx subject**” and press “**View Courses**”. If you wish to study any of the courses generated in the list that require that particular subject then you may have to consider keeping that subject. So for example, if you look up music and see that a course you are interested in, or may be interested in definitely requires music to may require music, then it would be wise to continue to study music. Also search for courses that require a science subject or a third language, as these can be searched for separately to the specific subjects themselves.

POINTS SYSTEM

LC Grading Scale	% Marks	HL Points	OL Points	LCVP Points
H1/O1	90-100	100	56	Dist. 66
H2/O2	80<89	88	46	
H3/O3	70<79	77	37	
H4/O4	60<69	66	28	Merit 46
H5/O5	50<59	56	20	
H6/O6	40<49	46	12	Pass 28
H7/O7	30<39	37	0	
H8/O8	0<29	0	0	

All points only apply where **Minimum Entry Requirements** have been met.

Points are calculated on your **best 6 subjects**

Bonus points for **Higher Level Maths** Universities and Institutes of Technology will award 25 bonus points for Leaving Certificate Higher Level Mathematics to students who achieve a grade H6 or above. This means that the maximum cumulative LC points total is 625. There are generally **no points** awarded for **Foundation Level subjects**, however, a few courses in I.T.’s may award points in Foundation Level Maths papers. Check the college prospectus.

The maximum possible adjusted points score for applicants to **Medicine** is 565. (For all scores over 550, each 5 point band equals one extra point.) The baseline score of 480 points will still apply.

Leaving Certificate Examination Points Statistics for 2019

(nominal points score, including bonus for Higher Level Mathematics, without reference to eligibility)

Best six (6) subjects counted for scoring.

			Cumulative Total	
Candidates scoring 625 points	207	0.4%	207	0.4%
Candidates scoring from 600 - 624	574	1.0%	781	1.4%
Candidates scoring from 500 - 599	6,684	11.9%	7,465	13.3%
Candidates scoring from 400 - 499	13,489	24.1%	20,954	37.4%
Candidates scoring from 300 - 399	14,266	25.4%	35,220	62.8%
Candidates scoring from 200 - 299	10,732	19.1%	45,952	82.0%
Candidates scoring from 100 - 199	6,557	11.7%	52,509	93.6%
Candidates scoring less than 100	3,562	6.4%	56,071	100.0%
Total	56,071			

DIFFERENTIAL APTITUDE TESTS RESULTS

An aptitude test is an instrument used to determine and measure an individual's ability to acquire, through future training, some specific set of skills. There are several aptitude tests on the market, and the one chosen is called the *Differential Aptitude Test*. This test covers several areas including, Verbal Reasoning, Numerical Ability, Abstract reasoning, Perceptual Speed and Accuracy, Mechanical Reasoning, Space Relations, Spelling, and Language Use. The tests are performed under exam conditions and are strictly timed. All questions have a definite right or wrong answer. Very few candidates usually complete the entire test and the questions usually become progressively more difficult. The test is also age related.

These tests can be used to help an individual

1. Chose among educational and career options based on strengths and weakness
2. Help an individual understand why they do well or poorly in certain subjects.
3. Can suggest new career options not previously considered.
4. Change or raise educational and career aspirations.

They cannot however, pinpoint one *specific* career or one *specific* subject that an individual should pursue.

All test of this nature should be viewed with extreme caution. Under no circumstance should the score be interpreted as final indisputable evidence of an individual's characteristics. The results provide only one small part of the information needed to help an individual make informed and realistic decisions and cannot be judged in isolation from other aspects of a persons character including, job and other experiences, interests, goals, personality, values, family and environmental influences. Other factors that can also influence an individual's scores are; a hearing, visual, or physical disability or a poor command of English, as well as poor health or fatigue or an emotional disturbance on the day. In addition, an individual can lose his place on the answer sheet or may simply not be interested in cooperating with the exercise, or indeed, may simply be in bad humour on the day. Finally, it needs to be remembered that an individual can have an aptitude for a particular area but have no interest in it, and conversely, may have a low aptitude in area a have an extreme interest or liking for it.

Percentile and Stanine

When an individual takes a test the results a produced are raw scores. For example, if a candidate scores 17 in a test it has very little meaning unless it know how this score relates to the total possible score. It is common therefore, to convert scores to percentages as this gives an indication as to how the candidate performed relative to a total possible score. However, percentages can themselves be misleading. For example, if a candidate scores 90% in a test, this might seem to be a very good score, but, if all the other candidates score 95%, this puts a different perceptive on this score of 90%. Therefore two systems are used to convert raw scores to a system that gives meaning to the result in terms of (i) the total possible score, (ii) the score relative to the score obtained by other candidates. These two systems are referred to as, *percentiles* and *stanine*.

- A *percentile* score indicates the percentage of candidates who fall below a particular raw score. A score, which falls at the 65th percentile, means that an individual's score is better than 65% of the students. A 95th percentile score means that an individuals score is greater then 95% of the students, or, that this student's score is in the top 5% of students.
- *Stanine* scores is a range expressed as a series of single digits numbers between 1 and 9, were 4 to 6 represents an average score.

What Each Test Measures

Verbal Reasoning This test measures the ability to see relationships among words and use concepts expressed in words. The test may be useful in helping to predict success in academic courses as well as in many occupations including business, law, education, journalism and the sciences

Numerical Ability The ability to reason with numbers, to deal with materials and ideas that use numbers. Numerical reasoning is important for success in such courses as mathematics, physics, chemistry and engineering. The ability to reason with numbers is also important in many occupations, such as bookkeeping, laboratory work, carpentry and tool making.

Abstract Reasoning This test is a non-verbal measure of reasoning ability. It assesses how well individuals can reason with geometric figures or designs. This type of ability is important in courses or occupations that require the ability to see relationships among objects in terms of their size, shape, position and quantity. Examples include such fields as mathematics, computer programming, drafting and car repair.

Mechanical Reasoning The understanding of mechanical principles and devices, and the laws of everyday physics. Those who do well in mechanical reasoning usually find it easy to learn to repair and operate complex devices. Occupations such as carpenter, mechanic, engineer, electrician and machine operator are among those that require good mechanical ability.

Space Relations The ability to visualise, to think in “three-dimensions” or mentally picture the shape, size and position of objects when shown only a picture or pattern. Occupations in which an individual is required to imagine how an object would look if made from a given pattern include drafting, architecture, art, clothing design, carpentry and dentistry.

Spelling The spelling test measures how well test takers can spell common English words. The ability to spell is a basic skill necessary in many academic and vocational pursuits. It is also a helpful skill in courses that require written reports.

Language Usage The Language Usage test measures the ability to detect errors in grammar, punctuation and capitalization. Well developed language skills are needed in most jobs requiring a college degree. Careers in writing and teaching require a high level of ability in this area. This test measures skills, which are important in so many areas of education and work – e.g. secretaries, writers, librarians, and editors.

Perceptual Speed and Accuracy This test measures the ability to work accurately with detail and at speed. Such an ability is important in many kinds of routine or detailed work (clerical work, data entry or coding, for instance) and is also quite important for scientific or technical work where precision is required (e.g. computer programming or laboratory work). Furthermore, this is an ability required in all work where attention to detail and quality are important (e.g. accountancy and some types of legal work).

Summary:

Aptitudes	Possible Subjects	Possible Career Areas
Verbal Reasoning	English, Irish, French, Spanish, History, Religion, Business, Geography, Biology, Agricultural Science	Business, Law, Education, Journalism, Sciences
Numerical Reasoning	Mathematics, Physics, Chemistry, Accounting, Construction, DCG, Technology	Bookkeeping, Laboratory work, Carpentry, Tool making, Engineering, Navigating, Sciences
Abstract Reasoning	Mathematics, Physics, DCG, Technology, Geography, Chemistry, Agricultural Science.	Mathematics, Computer programming, Drafting, Car Repair, Electrical and Mechanical Engineering
Space Relations (3D)	Art, DCG, Chemistry, Construction, Physics, Technology	Drafting, Architecture, Art, Clothing Design, Carpentry, Dentistry, Engineer
Mechanical Reasoning	Construction, DCG, Art, Physics, Technology	Carpenter, Mechanic, Engineer, Electrician, Machine Operator,
Perceptual Speed and Accuracy	DCG, Art, Business, Accounting	Filing, Clerical work and Jobs involving coding, and technical/scientific data
Language Usage	English, Irish, French/Spanish	Writing, Teaching, Secretaries, Librarians, Editors, third level Degree programmes
Spelling	Almost everything	Necessity in many academic and vocational pursuits.
Educational Aptitude (Verbal and Numerical)	Everything!	Your ability to learn from books and teachers. Good indicator of Third Level Performance.

Caution- DAT's do not give a full picture

Here are some examples of scores from past students (A to J) and the resulting points scored in their Leaving Certificate. There must be something else contributing to exam success than just aptitude.

	A	B	C	E	F	G	H	I	J
Verbal Reasoning	90	37	92	93	25	10	5	80	56
Numerical Ability	91	94	97	99	17	17	50	78	60
Abstract Reasoning	89	42	96	98	42	66	38	50	94
Speed & Accuracy	90	92	68	80	60	90	55	89	21
Mechanical Reasoning	95	58	99	82	4	54	11	90	65
Space Relations	96	51	95	99	45	89	11	88	96
Spelling	88	99	99	81	60	23	32	87	40
Language Use	90	90	85	76	47	27	23	88	40
Educational Aptitude	90	70	97	99	18	12	20	90	45
Points In The Leaving Cert.	600	580	490	450	405	330	310	250	220

In 2019, 56,071 students sat the Leaving Certificate and the average points scored nationally is 340

Remember aptitude tests do not measure many other qualities that are vital in successful careers such as, Determination to succeed; Enthusiasm and confidence; Energy to work long hours to achieve objectives; Determination to identify and find solutions to problems; Integrity, loyalty, and honesty; Commercial and entrepreneurial instinct; Initiative, creativity, and inventiveness; Ability to persuade and motivate others; Team spirit; Leadership; Ability to help others succeed; Empathy; Forward planning; Refusal to accept defeat; Sense of humour; Intrapersonal skills; Interpersonal skill; Having fun; Being socially responsible; Having the skill to make friends; Independence; Impulse control; Stress tolerance; Being realistic; Optimism; Self-regard; Flexibility and adaptability; Being grateful; Self-actualisation

Success is not about how smart you are, but how are you smart!

FINAL REMARKS**Career Focus**

Remember that all third-level colleges and courses have minimum subject-entry requirements. If you do not meet them it does not matter how many points you receive in the Leaving Certificate you will not get a place on the course. It may seem very early to be raising the question of a career, but some are accessible only through particular courses, which are open only to students who have successfully taken particular subjects in their Leaving Certificate. Unless you are certain that you want to pursue a career in a particular field and wish to concentrate on associated subjects, I would strongly advise taking a range of subjects from different areas of study. The most important factor is whether you enjoy the subjects you have chosen. You are always going to work harder at subjects that you enjoy most.

Subject Option

The options form is administered to all TY and 3rd year students. It is designed to help to identify the level of demand for different subjects and actual subject blocks that we can offer in 5th year next year. This form will be used to allocate subjects into blocks, and students into these blocks. It is very important that you number your preferences correctly. If your first and third preferences clash, you will be placed in your first selection.

Bear in mind that not all subject combinations may be available due to timetable clashes. In Colaiste Choilm the subject option bands are driven by students subject choices in a given year group, i.e. the bands are decided on a 'best fit' analysis of the returned subject choice forms. If you do not return your subject choice form, or have not listed your subjects in preference, then you may be disappointed with the combinations or your assigned subjects. So select at least five subjects, listing them in **order of priority**, in order to get places in your top preferences, and return the subject choice form **on time**.

What happens if I take Foundation Level Maths?

You will be ineligible from the vast majority of courses. These include most Engineering, Computing, Science, Information and Computer Technology Courses, Business Courses, Construction Courses and Agricultural Courses. However, some Humanities programmes and Social Science Programmes are available in Universities and Institutes of Technology. Please talk to Ms. Burke (Career Guidance) before deciding to undertake Foundation Level Maths.

What are the hardest and easiest subjects in the Leaving Certificate?

There is no such thing as easy Honours in the Leaving Certificate. Some subjects may appear to have very high success rates, such as music, in which 90.5% of candidates receive a H4 above in 2019. However, very few people sit this paper and they tend to have been passionate about the subject since childhood. Subjects taken by large groups of students, such as English, History, Geography, Biology and Business, tend to have Honours rates of 60-70 per cent. In 2019, 67.8% percent of students studying History secured a H4 or above. Applied Maths candidates generally earn a large number of H1's (16.2% of student secure H1 in 2019). 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 **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 (see the table below). 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. 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 next door neighbour says "don't do Geography because I found it hard". It being difficult for the cousin or neighbour does not mean it will be difficult for another student. All Leaving Certificate subjects require a two-year

Ms. Burke
 commitment. There are no short cuts. The best advice is to choose subjects *you like*, have an *interest* in, and have an *aptitude* for.

The Stats in 2019:

Subject	HI (90%+)	H4-H2 (60-89%)	H7-H5 (30-59%)	H8 (30%<) Fail	O1 (90%+)	O4-O2 (60%-89%)	O6-O5 (40-59%)	O7-O8 (40%<) Fail
History	6.7	61.1	30.4	1.8	5.2	55.2	33.3	6.4
Geography	3.7	56.9	38.5	1	1.9	55.8	36.4	6
French	6.2	55.2	38	0.6	0.1	44.5	45.3	10.1
Spanish	7.7	54	36.8	1.5	0.9	57.7	32.2	9.2
Art	3	60.6	34.9	1.4	2.2	62.4	24.7	10.6
Applied math's	16.2	53.5	25.6	4.9	15.5	36.2	25	23.3
Physics	10.8	45.5	36.3	7.4	3.7	56.8	25.7	13.8
Chemistry	13.2	49.3	30	7.5	3.9	41	32.4	22.6
Agri science	4.8	43.5	44.4	7.3	0	25	47.5	27.5
Biology	7.7	48.9	38.6	4.8	0.2	44	42.6	13.2
Construction	2.9	59.1	36.3	1.7	0.2	33.4	48.1	18.3
Accounting	6.6	57.4	29.6	6.5	8.9	49.3	20.9	20.9
Business	4	54.6	37.9	3.5	3.7	60.9	28.9	6.5
Technology	5	62.5	29.5	3	1.7	48.9	30.1	19.3
Music	3.9	86.6	9.5	0.1	0.5	72.5	23.8	3.3
Religious ed	3.1	64	31.2	1.7	0	35	29.5	35.7
DCG	6.5	64.9	26.9	1.7	2.1	57.9	27	12.8
Politics & society	4.6	52.6	39.1	3.6	0	44.6	45.7	9.7

Caution re 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”.

Business Questions:

Question 1

- (A) Outline the procedures an employer should follow under the Unfair Dismissals Acts of 1977-2007, before dismissing an employee. (20 marks)
- (B) A legal contract can be terminated by breach, frustration or agreement. Illustrate your understanding of the underlined terms. (20 marks)

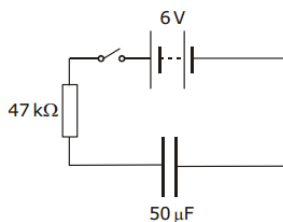
The Consumer Protection Act 2007 came into effect in Ireland on 1st May, 2007. The Act provided for the establishment of the National Consumer Agency, which replaced the Office of the Director of Consumer Affairs.

- (C) Evaluate the role and functions of the National Consumer Agency (NCA) in protecting consumers. (20 marks)

Define (i) potential difference, (ii) capacitance. (12)

Describe an experiment to demonstrate that a capacitor can store energy. (12)

The circuit diagram shows a $50\ \mu\text{F}$ capacitor connected in series with a $47\ \text{k}\Omega$ resistor, a $6\ \text{V}$ battery and a switch. When the switch is closed the capacitor starts to charge and the current flowing at a particular instant in the circuit is $80\ \mu\text{A}$.



Calculate

- the potential difference across the resistor and hence the potential difference across the capacitor when the current is $80\ \mu\text{A}$;
- the charge on the capacitor at this instant;
- the energy stored in the capacitor when it is fully charged. (27)

Describe what happens in the circuit when the $6\ \text{V}$ d.c. supply is replaced with a $6\ \text{V}$ a.c. supply. (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 a H1 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.

Useful Websites

www.cao.ie

www.scoilnet.ie

College websites, e.g. www.nuig.ie; www.tcd.ie

www.qualifax.ie

www.studyclix.ie

www.careersportal.ie www.ncca.ie

Concluding Remarks

Don't make rash decisions- subject choice should not depend on what teacher will be teaching a certain subject at Leaving Certificate. Neither should you copy your friend's decisions, or opt to do subjects because a friend says it's easy- everything is easier when you are interested and have the aptitude, so discover your own and use that knowledge to make your decision. In other words pick the subjects you are most interested in and have an aptitude for!



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SENIOR CYCLE SUBJECT OPTIONS 2020

Student Name: _____ Return to Reception by **Wednesday April 1st**

Please indicate whether you wish to progress to Transition Year or directly to Leaving Certificate:

Transition Year Option

Leaving Certificate

Regardless of which option you ticked above, please fill in the section below.

All Leaving Certificate students study Maths, English, Irish and **4 other subjects** from the list below.

Please select **6 subjects** from the list below, in order of genuine preference by numbering your preferences from 1-6 in the boxes provided (1 being your first preference, 5 and 6 as backups)

Accounting.....

French.....

Agricultural Science.....

Geography.....

Applied Maths.....

History.....

Art.....

Music.....

Biology.....

Politics and Society..

Business.....

Physics.....

Chemistry.....

Religion.....

Construction Studies

Spanish.....

D.C.G. (Tech Grap.).....

Technology.....

Do you intend to do LCVP? Final selection will take place in September.

Yes

No

Is there any other subject, not listed above, that you would like to study? If so, what subject? Why?

Signature of Parent/Guardian: _____ Date: _____

Signature of Student: _____ Date: _____

Please note that certain subject combinations are required in order to be eligible for L.C.V.P. These combinations are listed in the careers information booklet and on this form.

What is L.C.V.P.

The Leaving Certificate Vocational Programme (LCVP) is an intervention designed to enhance the vocational dimension of the Leaving Certificate (established). The LCVP combines the academic strengths of the Leaving Certificate (established) with a new and dynamic focus on self-directed learning, innovation and enterprise. This two-year programme aims to prepare young people for adult life by ensuring that they are educated in the broadest sense, with an ability to cope and thrive in an environment of rapid change.

Programme Requirements:

- At least five Leaving Certificate subjects, one of which must be Irish
- Two of the above subjects must be selected from one of the designated VSGs (below)
- Two Link Modules: Preparation for the World of Work and Enterprise Education
- A recognised course in a Modern European Language other than Irish or English Vocational Subject Groupings (VSGs):

Two subjects are selected from one of the groupings below:

Eligible Subject.....	..if combined with one of the following:
Art	Accounting, Business, or DCG
Accounting	Agri Science, Art, Business, Construction Studies, Technology, DCG, or Music
Business	Agri Science, Accounting, Art, Construction Studies, Technology, DCG, or Music
Biology	Agri Science, Chemistry, or Physics
Chemistry	Agri Science, Biology, or Physics
Construction Studies	Accounting, Business, DCG, Technology or Physics
Design and Communication (DCG)	Accounting, Art, Business, Construction Studies, Technology or Physics
Physics	Agri Science, Biology, Chemistry, Construction Studies, or DCG
Music	Accounting or Business
Agricultural Science	Construction Studies, Technology, DCG, Chemistry, Physics, Biology, Accounting, Business
Technology	Construction Studies, DCG, Physics, Agricultural Science, Accounting, Business