

Leaving Certificate

INTRODUCTION

The following has been compiled in order to assist students in the important decisions they now have to make regarding the subjects they may wish to study at senior level. Our aim has been to give you a sense of:

- the contents of that subject for Leaving Certificate
- where it is similar to the Junior Certificate course
- where it is different to the Junior Certificate course
- Key points you should consider when thinking about this subject
- careers that this subject could be useful to.

Irish, English and Mathematics are required subjects for all students (unless you have an exemption from Irish), and you then select your 4 option subjects from the following list –

Technology

Accounting

Design & Communication Graphics

Agricultural Science

Physics

History

Geography

Art

Economics

Biology

Chemistry

Business

Continental Language

Some subjects may be restricted depending on subjects chosen for Junior Certificate.

Subjects dropped at end of 1st year	Subjects which may be taken up again at Senior level	Subjects which may not be taken up again at Senior level
Art	Art	
Business Studies	Business Economics	Accounting
French		French
German		German
Spanish		Spanish
Technology		Technology
Technical Graphics		Design & Communication Graphics

Repercussions of dropping the continental language:

- **NUI colleges (UCD, UCC, NUI Galway and NUI Maynooth) require that students have passed a continental language for matriculation purposes. HOWEVER**
- **For entry to:**

Faculty of Engineering & Faculty of Science NUI Maynooth

Bachelor of Engineering, Science and Agricultural Science degrees UCD

Faculty of Engineering & Faculty of Science NUI Galway

NO THIRD LANGUAGE IS REQUIRED

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GUIDELINES TO CHOOSING SUBJECTS

How Important Is The Choice?

Sometimes there is a sense that there may be long-term problems, or reduced choices in the future if they get the choice wrong, but the truth of it is that this is only the case in relation to Science, and then only in relation to a small number of courses currently on offer at 3rd level.

There are no requirements with regard to any of the other subjects that would prevent your son from following a course of interest in the future.

Making the Choice

What is important is to select subjects that they find interesting and enjoyable; subjects that they generally listen well to and take part in class, subjects that come easily to them and in which they usually get good results in tests. If all these are in place then your sons will have layers of study done before ever they come to revise a subject – and this is a great basis for success.

What career area interests you? – Are some subjects **required** to pursue that area of study?

What subjects might be helpful for your course or area of work?

Do your choices keep your options open for the future?

If your choices close off future options – have you discussed this with parents, teachers?

WHAT SHOULD YOU DO IF YOU ARE UNCLEAR ABOUT WHAT SUBJECTS TO CHOOSE?

Journalism

HC3 English

Students are advised to **always check** the exact **requirements** for courses that interest them as they can vary from college to college, and may change from year to year.

Subject by Subject:

ACCOUNTING

Accounting involves the recording of financial information by the individual, voluntary organization or business, the presentation of this financial information and the interpretation and uses of this financial information

A STUDENT CHOOSING TO STUDY ACCOUNTING CAN EXPECT TO UNDERSTANDØ How and why financial information is recorded

Ø How to interpret and use the information in accounts

Ø How to record, present and interpret financial information of voluntary organisations.

Ø The importance of financial information for good decision-making.

Aspects of the course which continue strongly from Junior Cert

Final Accounts- Trading, profit and loss Accounts and Balance Sheets

Club A/Cs, A/Cs of service firms, farm a/cs

Analysis of Accounts, Ratios

Double Entry Bookkeeping throughout.

(There is more in-depth treatment of all of these at Leaving

Cert level)

Key changes in this subject at Leaving Cert level

Accounts of Public companies

Preparation of final accounts from incomplete information

Management accounting-costing products, budgeting

There's an increase in the level of understanding needed and there will be practical homework every night.

Key Points to consider

Must have done Business Studies at Junior Cert preferably at higher level.

A student must like bookkeeping at Junior Cert level and also working with figures- must like to get a "kick" from getting accounts to work out.

Must be able to think abstractly, logically and clearly

It is a very practical subject- learning is by doing. Revision is done by answering questions.

There can be relief from "theory" type subjects -where there's a lot of learning by heart

Students need an understanding of double entry

It is a Major advantage for studying Accounting/Business at 3rd level, even though again it is not a course requirement.

ACCOUNTING IS USEFUL FOR CAREERS IN:

Accountancy, Auctioneering, Auditing, Advertising, Banking. Bookkeeping, Building Society Clerk, Business Law, Clerical Work, Company Secretary, Hospital Administration,

Hotel Management, Insurance, Market Research, Purchasing Officer, Quantity Surveyor, Receptionist, Sales Representative, Taxation Consultant, Teaching, Computers

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AGRICULTURAL SCIENCE

Agricultural science is the study of the science and technology underlying the principles and practices of agriculture. It aims to develop knowledge, skills and attitudes concerning the factors that affect the long-term wellbeing of agricultural resources, and places emphasis on the managed use of these resources.

Content

The course consists of the study of a variety of aspects of agriculture under the following headings:

- Soils
- The general structure and function of plants
- Farm crops – cereal and roots
- Farm crops – grassland
- Trees and shelter
- Structure and function of the animal body
- The cow, the sheep, horse, and pig
- Farm buildings (for school assessment only)
- Farm-house environment (for school assessment only)

Assessment

The examination in Agricultural Science consist of (a) a terminal examination paper and (b) an assessment of the work of the candidate during the course under the headings: identification of plant and animal types associated with agriculture; practical experience with crops, livestock, house and farmyard layouts; investigations carried out related to ecology, soil science, animal physiology, plant physiology, genetics and microbiology.

Agri Aware and the Agricultural science teachers association compile a weekly agricultural science feature that appears in the Irish Farmers Journal. The page runs from September to June and covers all topics on the curriculum with additional features such as exam revision, useful tips, practical assessment advice and information on career opportunities from recent agri graduates.

Key Points to consider

Being from a farming background is a distinct advantage in this subject

CAREERS THIS SUBJECT IS USEFUL FOR

Farming, Agricultural Science, Agri-Business, Horticulture, Farm Management, Forestry, Food Science, Dairy Science, Geology

ART

At the end of a two-year Leaving Cert programme in Art, the students take examinations in the following subjects

1. Life Drawing

2. Design

3. Still Life or Imaginative Composition

4. History & Appreciation of Art.

Aspects of the course which continue strongly from Junior Cert

Practical Aspects/Skills, techniques are key features, which are transferable along with knowledge base of the subject

Key changes in this subject at Leaving Cert level

No project at Leaving Cert- all work is exam based:

All the practical exams take place in early May

Still life (2 $\frac{1}{2}$ Hours)

Design (2 $\frac{1}{2}$ hours)

Life drawing (1 hour)

Art History, a 2- $\frac{1}{2}$ hour paper dealing with Irish Art, European Art, and general appreciation. Exam takes place in June.

Please note; this section of the course accounts for almost

40% of the total mark allocation and may pose difficulties for some students at Higher Level.

Key points to consider

Previous art experience at Junior Cert is desirable but not essential.

Good average literacy skills needed

Anyone hoping to continue on with a degree in Art or design should start working on a portfolio in 5th year as it is too late by the time 6th year comes

ART IS USEFUL FOR CAREERS IN

Advertising, Graphics, Photography, Teaching, Architecture, Bookbinding, Crafts, Fashion, Florist, Environmental Designer, Furniture, Curator for Galleries and Museums, Industrial Design, Interior Decoration, Marketing, Merchandiser, Occupational Therapist, Primary School Teacher, Picture Restoration, Printing and Publishing, Sculptor, Sign-writing, Video Production, Media Studies, Textile Design, Poet, Television, Theatre, Town Planning.

BIOLOGY

Biology is the science of life and living things. More than any other science, Biology is part of everyday experience. When you visit a nature reserve, watch the behaviour of a pet animal, or collect a prescription from the chemist, there is a close encounter with Biology. Biology forms a knowledge base for hundreds of careers ranging from oceanography and ecology

to medicine and biotechnology.

The next hundred years looks set to be the 'century of Biology', as we gain greater knowledge of the science of life. Spectacular breakthroughs have recently been made in genetics, cell biology and the understanding of the human brain. Remarkable advances have occurred in environmental science and evolutionary studies. A huge choice of careers has grown out of the practical applications of these recent discoveries and there has never been a greater demand for people to become research biologists.

The Leaving Certificate Biology course is an excellent foundation to view the many different life sciences as different chapters of the book of life. The need for a scientifically informed public has never been greater as we are faced with hugely important decisions in areas such as cloning, DNA fingerprinting, genetic modification of organisms, overpopulation, energy sources and pollution.

From an employers point of view there are some qualities developed during the study of biology which make it specially valuable as a preparation for industry

Ø Most Biologists become familiar with statistics and computers used in data processing. This skill is directly transferable to many other jobs.

Ø Fieldwork and some Laboratory work can be a team activity. Taking personal responsibility and learning to work together with others in a group are qualities valued highly by employers

Ø Speaking the language of science is a highly valuable asset in this era of high technology

Aspects of the course that continue strongly from Junior Cert

Human Biology-e.g. blood system, nervous system, food

Ecology/Plant Biology

Experiments

Key changes in this subject at Leaving Cert level

Genetics- DNA, Cancer (more application to everyday life)

There are 22 experiments, which must be done

Lots of Ecology, less study of worms, liver fluke, seaweeds etc

Key points to consider

You do not need to be mathematical

The new course is supposed to be shorter than the old biology course

To do well in Biology consistent hard work is needed

BIOLOGY IS USEFUL FOR CAREERS IN

Health Professionals, Environmental Officers, Publishing, Journalism and Broadcasting, Library work and Information Science, Environmental Conservation, Beautician, Marine and

Freshwater Biology, Animal Nurse, Education, Horticulture, Zoologist, Food Industry, Production Management, Brewing

BUSINESS

Business is mainly about people and products. It's about having ideas, spotting opportunities, having the courage to chase your dreams, and sticking with it when the going gets tough. It's about understanding people as customers, investors, employees and partners. To be successful you will need good management, access to finance and a bit of luck. But ultimately it's about always trying to do things in a better, more innovative way so as to meet customer needs and stay ahead of the competition.

The Leaving Certificate Business course has been designed to prepare you for this rapidly changing business environment. It emphasises the practical skills needed by entrepreneurs, the essential elements of a business plan, the steps involved in developing new products and marketing them to a national or international market. It focuses on the key principles and activities of management. It outlines the global economic environment in which all business now operates and it examines some ethical and environmental challenges.

WHAT CAN YOU EXPECT TO STUDY IN BUSINESS

Ø The different types of business units which exist and how to set one up e.g. sole traders, partnerships, companies.

Ø Understand that for a business to operate efficiently it will require many services; finance, banking, insurance, market research, advertising and sales promotion.

Ø Understand and be able to present information in a variety of forms e.g. reports, agendas etc.

Ø Understand the importance of the State in promoting

enterprise within Ireland

HOW WILL YOU BENEFIT FROM STUDYING BUSINESS

Ø You will be able to calculate your own income tax and PRSI

Ø You will understand your rights as a consumer and how the law protects you.

Ø You will understand various types of insurance cover.

Ø You will understand the role of trade unions in a modern society and the way they, and the State, protect workers.

Ø You will understand the environment within which a business operates in Ireland, in the European Union and in a worldwide context.

Aspects of the course which continue strongly from Junior Cert

Cash flows, income and expenses projections, budgets- fixed, irregular, discretionary.

Consumer legislation, setting up an enterprise

Insurance- individuals and business, Taxation- individuals and business

European Union, Marketing, Raising finance and borrowing

Key changes in this subject at Leaving Cert level

- Management – skills, communication
- Labour legislation and Business ethics
- All topics are examined in more detail
- A greater focus is placed on the student being able to evaluate e.g. higher level students must do a compulsory case study
- “T” accounts, preparation of final accounts not required

Key points to consider

To do well at higher level students must learn definitions.

From 2nd term in 5th year students must submit written work weekly on their case study

BUSINESS IS USEFUL FOR CAREERS IN

Accounting, Banking, Bookkeeping, Clerical Work, Company Secretary, Administration, Hotel Management, Insurance, Purchasing Officer, Sales, Marketing, Merchandising, Customs and Excise, Taxation, Teaching, Law, Business Management.

CHEMISTRY

Chemistry gives you an excellent training for many jobs, both scientific and non-scientific. To be successful in the subject

you need to be able to think **logically**, to be **creative, numerate and analytical**. These skills are much sought after in many walks of life and would enable you to pursue a career in computing or finance as well as careers in which you use chemistry directly.

We live in a world of chemistry, and you don't need the men in white coats to tell you that! Chemical substances are around you all the time, from the sugar you put in your coffee to the cosmetics you wear, from the dyed fabrics in your wardrobe to the medication you take for a head-cold.

Chemistry is the study of what substances are made of, what effects they have on one another and what changes they undergo. Without this branch of study, we wouldn't have unbreakable bottles or synthetic fabrics, CD players or the silicon chips that drive our TV sets, computers, and mobile phones.

The Leaving Certificate course has recently been revamped and is designed to stimulate interest in, and enjoyment of, the subject. It encourages an appreciation of the social, economic, environmental and technological aspects of chemistry. It seeks to develop a facility for scientific method and rational thought, and the skills of observation, evaluation, and problem solving that will stand to you in other areas of life.

About 70% of the syllabus consists of pure chemistry, with the rest concerning the social and applied aspects of the subject. Essential practical work is included, so there are plenty of experiments that have to be done. But chemistry is not just for those who want to work in a laboratory – the knowledge provided by the course gives a scientific base, which is useful for a multitude of courses and careers.

GOOD REASONS FOR CHOOSING CHEMISTRY AS A CAREER

Ø New ideas and materials are constantly being used in

technology to improve society. You could work in a field where **Research** and **Innovation** are of primary importance to standards of living.

Ø Chemistry offers many career opportunities whether working in a public service such as a water treatment plant or high-level research and development in industry.

Ø As society becomes more technically advanced the need for suitably qualified chemists will

Increase.

Aspects of the course that continue strongly from Junior Cert

Leaving Certificate builds on and develops Junior Certificate learning in;

Structure of the Atom; elements and compounds;

Preparation of gases; acids/bases/salts and Indicators etc.

Junior Cert Maths – solving equations in 1 variable both linear and quadratic.

Ease with calculator use.

Key changes in this subject at Leaving Cert level

New Topics: Radioactivity, Thermo chemistry and Bond energy.

A big section of Organic Chemistry.

Social Aspects and History of Chemistry.

All Junior Cert areas are extended and there is a lot of

practical work.

Key Points to consider

Must start learning immediately in 5th year because you can get lost very easily

Ordinary **Maths** at Leaving Cert is adequate to support this subject.

English – You need the ability to say exactly what you mean, or to be able to learn definitions off by heart. Higher level English at Junior Cert should be a min requirement.

No essay type answers required – there are right answers.

It is not difficult to get full marks on a question.

One class- unstreamed, ranging from higher A level to ordinary D level. Can be difficult for weak students to keep up.

CHEMISTRY IS USEFUL FOR CAREERS IN

Pharmacy, Nursing, Chemical Engineering, Industrial Chemistry, Food Science, Veterinary Science, Medicine, Applied Science, Dentistry, Agriculture, Forestry, Mining, Polymer Science, Dairy Science, Forensic Science, Photographic Processing, Teaching, Pollution Control, Cosmetic Science, Quality Control, Biotechnology, Health Care and Pharmaceutical Industries

CONTINENTAL LANGUAGE

As stated earlier a continental language is a requirement for entry into the NUI colleges and their affiliates (except in the case of the **Faculty of Engineering & Faculty of Science NUI Maynooth, Bachelor of Engineering, Science and Agricultural Science degrees UCD, Faculty of Engineering & Faculty of Science NUI Galway**). However you do not need a continental language for Trinity College, DCU, UL and all the Institutes of Technology except where the language will form a central part of the course eg. European Studies, Marketing and French etc.

There are 4 areas examined

1. Oral Assessment
2. Listening Comprehension (Aural)
3. Reading Comprehension
4. Written Procedures

You must have done the language to Junior Cert level before you can choose it for Leaving Cert.

Key Points to consider

Not everyone is gifted with languages and if you are struggling to pass at Ordinary level at Junior Cert then you will find Leaving Cert level very difficult

CAREERS THIS SUBJECT IS USEFUL FOR

Tourism Industry, Air Steward, Teleservices, Customer Support, International Business, Marketing, Translating, Teaching, Administration jobs in the EU

DESIGN & COMMUNICATION GRAPHICS

This is the study of two and three dimensional Geometry. Paper 1 deals with pure Geometry topics while Paper 2 applies these topics to the engineering environment.

Course Outline

Students will study the following topics;

Paper 1: The Oblique Plane, Area of Figures, Loci, Conic Sections, Solids in Contact, Interpenetration of Solids

Paper 2: Engineering Assembly Drawing, Cams, Mechanisms, Gears, Dimensioning, Isometric Projection, Development, Screw Threads, Pipework, Limits and Fits, Engineering Structures, Fabrication, Engines, Computer Aided Draughting (CAD)

Aspects of the course which continue strongly from Junior Cert

All of the skills which are developed to Junior Cert are continued and enhanced to Leaving Cert

Key Changes in this subject at Leaving Cert level

Paper 2 – the Engineering part is new to Leaving Cert but constructions from Paper 1 are used and applied to Engineering problems so it is not totally new.

Conventions are learnt and applied to drawings – Conventions are simplified versions of International Standards in Technical Drawing.

Key Points to Consider

To take this subject to Leaving Certificate you should have a flair for it and be good at Maths. Honours Maths to Leaving Cert is not a requirement but it does help.

ECONOMICS

Everyday our newspapers, Magazines, radio and television programmes keep us in touch with a wide range of economic issues – unemployment, inflation, taxation, interest-rates, privatization, currency exchange-rates. E.U. Structural Funds, CAP reform, Third World issues..... the list is endless.

WHY STUDY ECONOMICS

Ø When you study Economics you will gain a good understanding of current affairs both nationally and internationally, and you will be well prepared to form reasoned opinions on a wide range of economic matters.

Ø Economics gives you a superb training for a wide range of jobs. The subject teaches you how to collect and analyse information, to think clearly, and logically. These are invaluable skills from an employer's point of view.

Ø Economics is a module contained in a wide range of courses, not just Business courses, at Third level institutions and to have studied it at second level is of tremendous benefit.

Aspects of the course which continue strongly from Junior Cert

Government and National Budget

Foreign Trade and Exchange rates

National Income/ GNP Measurement

Key changes in this subject at Leaving Cert level

There are 2 parts to the LC Economics Syllabus

(a) Macro Economics which deals with matters affecting the whole society/economy such as ones mentioned above and issues such as population, employment, unemployment, inflation, interest rates, the EU etc

(b) Micro Economics which is the study of individual markets i.e. buyers and sellers. It looks at how individuals and firms make choices regarding the use of the limited resources which we as an economy/society have.

Key Points to consider

Economics complements a student's study of other Leaving Cert subjects including Accounting, Business, Geography, History and English to name but a few.

When students start studying Economics in 5th year they must understand that it is like learning a new language and it's about putting the pieces of a jigsaw together bit by bit. At first they may feel confused but it "clicks" finally. This takes patience.

While it is not a course requirement for entry to 3rd level business courses it is of major benefit to students to have taken Economics at LC. This is an observation from experience and feedback from former students.

ECONOMICS IS USEFUL FOR CAREERS IN

Journalism, Social Work, Law, Politics, Stock-Broking, Advertising, Trade Unions, Marketing and Market Research, Engineering, Administration, Taxation, Banking, Research for TV, Quantity Surveying, Auctioneering, Hotel Management, Education

Economic geography

v 1 of 4 Optional Units
Interdependence

1. Global

2. Geoecology

3. Culture/Identity

4. The Atmosphere

Aspects of the course that continue strongly from Junior Cert

Analysis of Ordnance survey maps and aerial photographs

Study of the physical landscapes e.g. weathering/erosion

Description and explanation of population trends e.g.
Migration patterns

Key changes in this subject at Leaving Cert level

A very in-depth study of the above topics

Very detailed case studies

Focus on New terminology

Final Exam 400 marks

Investigation 100 marks (report including maps, figures, statistics & charts)

Key points to consider

Good word power and skill at analysing information

Short answer Multi-part questions, 1 essay at higher level

Geography skills (map reading etc) will be tested within all questions where appropriate.

Large amount of work to be covered

Need to work well on projects both as part of a team and individually.

GEOGRAPHY IS USEFUL FOR CAREERS IN

Town Planning, Tourism, Travel Agency, Archaeology, Meteorology, Estate Agency, Environmental Protection, Surveying, Civil Engineering, Cartography, Landscape Architecture, Agriculture, Forestry, Marketing, Leisure Industry, Local Government, Education.

HISTORY

History is a subject that embraces the world of politics, economics, religion and philosophy. It develops skills such as identifying main issues and the ability to select relevant information. A knowledge of history, or access to such knowledge, will enable a student to throw light on other subjects especially **art, literature** and **language**.

The **NEW HISTORY COURSE** is made up of two interlocking parts

- Working with evidence:

The nature of History and the work of the Historian

Documents based study – related to Case Studies given on topics

A Research Study – The Outline Plan

Evaluation of Sources

Extended Essay

- Topics for study – 1. Early Modern, 1492 – 1815 (2/6 Irish, 2/6 European & world Topics)

OR

2. Later Modern, 1815 – 1993 (2/6 Irish, 2/6 European & World Topics)

Aspects of the course which continue strongly from Junior Cert

Some modern topics will reappear at Leaving Cert level

Key points to consider

Should enjoy the subject and be prepared to study it and be reasonably good at English. Higher Level students will be expected to study all aspects of topics deeply and to develop a high level of theoretical understanding Ordinary Level will place more emphasis on the people / personalities in History.

General questions on the Ordinary Level paper will be stimulus driven – photos, maps, charts etc.

Final Exam – 80% 4 questions, 1 documents based

Investigation – 20% Extended essay

HISTORY IS USEFUL FOR CAREERS IN

Politics, Journalism, Local Government, Social Work, Archeology, Barrister, Civil Service History Teacher, Law Clerk, Researcher, Trade Union Official, Garda, Tourism, Writer, Broadcaster, Librarian.

PHYSICS

Ever wonder how live images from Afghanistan are beamed into your living room? Why apples fall to the ground but satellites stay up in the sky? Why the Moon seems to change its shape and the Sun is about half way through its life? How we are able to view the internal workings of the human body in glorious technicolour?

Physics can be a magnetic subject to study. It looks at the natural world in order to help us understand how things work. It has less to do with lab experiments and more to do with practical issues in your physical environment. Applications of physics are to be found in household appliances, medical advances, industrial production, communication systems, sports equipment and global travel.

The Leaving Cert course aims to give an understanding of fundamental principles and

their application, to develop an understanding of the scientific method and the physical environment, and to develop the ability to observe, to think logically and to communicate effectively. All these factors will prove beneficial in your further studies and career, whether you go on to be a rocket scientist or not!

The Physics course has recently been re-vamped and now includes a new section known as STS (Science, Technology & Society), which looks at physics in the everyday world, and helps to prepare you for life in an age of technology. There is also a practical section, with plenty of experiments to be done, so you will get a chance to wear that white coat and goggles.

Don't let inertia rule. Put some momentum into your life and enjoy the force that is got from studying physics. You might even learn how to programme that troublesome video-recorder!

Aspects of the course which continue strongly from Junior Cert

All topics in Junior Cert Physics are carried on in Leaving Cert Physics

Electricity is the biggest section and is examined in a lot more detail

Light and Sound are also developed in a lot more detail

Mechanics i.e. force, energy, speed, pressure are also studied in a lot of detail

Key changes in this subject at Leaving Cert level

New Aspects: Nuclear Physics, Radioactivity, Nuclear Energy, the atom

Science, Technology and Society, which investigates applications of physics in our world today

More emphasis on Experimental work and analysis of results

Key Points to Consider

Students should have a good understanding of maths however higher level maths at Leaving Cert is not a necessity.

If you are logically minded i.e. like to know how appliances work and like solving problems Physics is a good option.

Also good for those students who like practical work and experiments

PHYSICS IS USEFUL FOR CAREERS IN

Architecture, Astronomy, Biophysicist, Computer Careers, Dentist, Doctor, Engineer – especially electrical and electronic, Health Inspector, Radio Operator, Medical Laboratory Technician, Meteorologist, Navy, Nurse, Optician, Pharmacist, Physicist, Physics teacher, Photographic Technician, Pilot, Radiographer, various Trade Apprenticeships, Scientific Research.