Subject Choice Information for Senior Cycle, Summerhill College, Sligo.

2019-2020

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Leaving Certificate General Information

This booklet is designed to help students choose the subjects that they will study for the Leaving Certificate and the Leaving Certificate Applied programmes.

- Students following the established Leaving Certificate programme must take the core subjects of English, Maths and Irish (**unless exempted by the DES**).
- Four optional subjects are selected from the list of subjects outlined in this booklet.

  We will always endeavour to provide the optional choices requested. However, students and parents should be aware that some subject combinations may not be available due to timetabling constraints.

The School Guidance Counsellors are available to assist you in this decision. There are a number of considerations that need to be highlighted when choosing your subjects.

When choosing your optional subjects consider:

- Subjects you have a history of doing well in
- Subjects you will enjoy
- Subjects that suit the individual student – do not pick a subject because your friends are choosing it
- Talk to your teachers about subject course content for the Leaving Certificate.
- Ask the guidance counsellors for advice on subject choice.

Entry requirements for Courses are dependent on individual institutions.

Many courses have specific requirements. These should be taken into consideration also when choosing subjects.

To be certain of both minimum entry requirements and specific subject requirements for a course, it is **ESSENTIAL** to check with the individual college or course website. Alternatively, ask the guidance counsellors for advice if you are unsure of any details.

Each student sits seven subjects and the best six results are used to determine how many CAO points a student achieves. (Please see back cover of this booklet for explanation of points.)

- The CAO points system is used to determine access to Universities and Institutes of Technology.
- Subjects at higher level have more points available than subjects taken at ordinary level.

National University of Ireland (NUI)

NUI Colleges are
NUI Maynooth, University College Dublin, University College Cork, University College Galway, Royal College of Surgeons, National College of Art and Design, St. Angela's College, Institute of Public Administration, Shannon College of Hotel Management and Milltown Institute.

NUI Colleges
The NUI colleges require Irish, English & Modern Language for many of their courses.
They require students to have 2H5 + 4O6 for matriculation.

Trinity College Dublin
O6 - English, Maths & another Language (can be Irish)
3H5 + 3O6

University of Limerick
O6 - English, Maths & Irish OR another Language
2H5 + 4O6

Dublin City University
O6 - Maths & English OR Irish
2H5 + 4O6

Institutes of Technology
Level 6 - 5 O6/H7 (must incl Maths, Irish or English)
Level 7 - as above + min 140 points
Level 8 - 2 H5 + 4O6 (must incl Maths, Irish or English)

Useful websites and resources

There are many websites which can be used to research subjects, 3rd level courses and careers. Spend some time researching the information available on the sites listed below.

www.scoilnet.ie Department of Education and Skills official portal for Irish education
www.qualifax.ie Information on further and higher education and training courses
www.cao.ie Central Applications Office
www.ucas.co.uk UK college application system
www.gotocollege.ie Information on full-time courses in Ireland
www.careersportal.ie Information on career planning, training and employment

Irish, English and Maths
Irish, English and Maths are compulsory subjects. Irish and Maths are available at Higher, Ordinary and Foundation Level. English is available at Higher and Ordinary Level. Only students who are officially exempt from Irish are allowed not to sit Irish. All of these subjects are demanding at Higher Level. Please speak to individual teachers and/or a Guidance Counsellor for help choosing which level suits your ability. Please check www.examinations.ie for past sample papers.

Glossary of terms

HEI Higher Education Institute

CAO Central Application's Office. The CAO handles all applications to the HEI's.

DARE Disability Access Route to Education. DARE is a third level alternative admissions scheme for school-leavers whose disabilities have a negative impact on their second level education.

HEAR Higher Education Access Route. HEAR offers places on reduced points and extra college support to school leavers from socio-economically disadvantaged backgrounds.

RACE Reasonable Accommodation for Certificate Exams.

Special Education Needs (SEN)

Frequently Asked Questions.

***If I received Reasonable Accommodation for my Junior Certificate, will I automatically receive them for my Leaving Certificate?**
Yes. Under the new RACE scheme set out by the SEC, your accommodation will be reactivated.

***If I received Learning Support for during 1st, 2nd or 3rd Yr, am I entitled to the same for Leaving Certificate?**
Not necessarily. The student's current needs have to be reassessed under the new Continuum of Support.

***Can I use my laptop during my Leaving Certificate Exams?**
Only when a student has been identified with DCD (Developmental Coordination Disorder) and an OT has recommended that the use of a laptop if essential.

***How are students considered for an Irish exemption?**
Students are only exempted from Irish if they meet the criteria under curricular M10/94 from the Department of Education and Skills. Otherwise, Irish is a compulsory subject.

The Leaving Certificate Applied

The Leaving Certificate Applied is a two-year Leaving Certificate programme aimed at preparing students for working life and further education. Students may progress from further education to third level courses. This programme may be more suitable for students who may find the established Leaving Certificate challenging or unsuitable.

You should choose Leaving Certificate Applied if you:

- would prefer continuous assessment
- want to be involved in work experience over two years to assist entry into the workforce.
- like a varied school day including more practical subjects.
- want everyday use of computers
- want to be involved in project work and class trips

Important things about LCA

- Smaller class size.
- Attendance is part of final grade. (90% attendance is required)
- Continuous Assessment (60% Course work - 40% Final Exam)

What subjects will you be studying?

- English and Communications.
- Vocational Preparation and Guidance.
- Maths
- Social Education
- Personal Achievement
- Music/Art
- Irish/Spanish
- Leisure & Recreation
- Computer Studies
- Engineering/Childcare
- Construction/Hotel Catering & Tourism
- Agriculture & Horticulture

Calendar of Events

- Work Experience
- Cinema Visits
- Gaisce Award
- Guest Speakers
- Third Level Visits
- Adventure Centre
- Food Fair
- Visits to various business companies

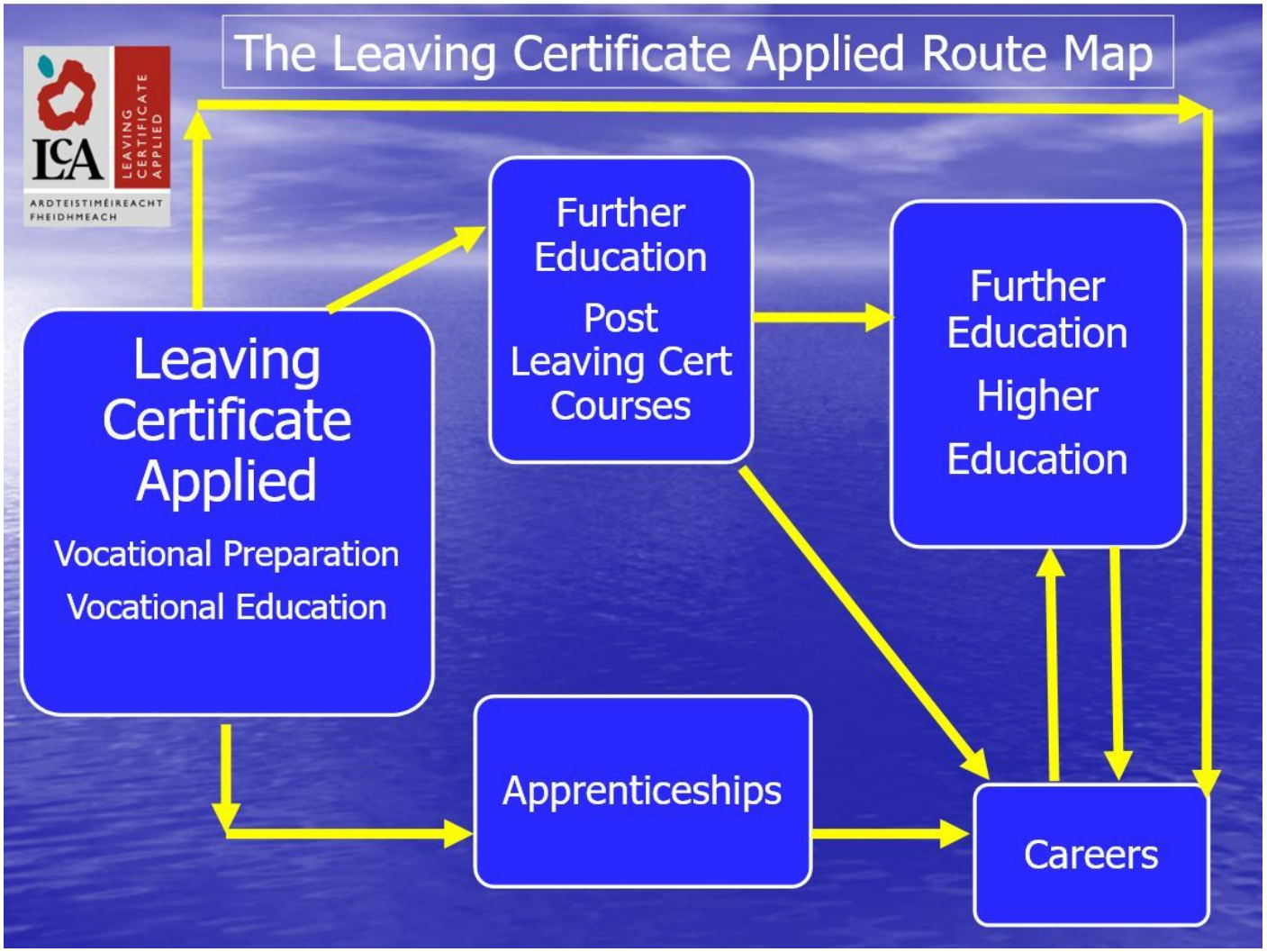
Can You Go To 3rd Level?

Yes, but you must successfully complete a 1 year PLC course.
Sligo College of Further Education and the Mercy College PLC are popular choice of college's for many of our LCA students. (see www.sligocfe.ie and www.mercycollegesligo.ie).

Other Options After LCA

Employment Training e.g. Tourism, Catering Industry, Banks, Army, Gardaí etc.
Apprenticeship.

The Leaving Certificate (Applied) Route Map



Subject Guide:
Modern Foreign Languages: Spanish & French

Modern Foreign Languages provide students with the skills, knowledge and opportunity to succeed in a global environment and in a multinational workplace.

Note: A modern language is required by many of the NUI Colleges. Please check individual faculty requirements.

How will French/Spanish be different after the Junior Certificate?

Modern Foreign Languages (MFL) expands on knowledge gained at Junior Certificate and has the requirement of a compulsory oral examination.

What will I learn in Leaving Certificate French or Spanish?

- **Oral** – talking about yourself and everyday life
- **Aural/Listening**
- **Reading Comprehension** – understanding contemporary issues in texts in the target language
- **Writing** – communicate and express opinions through letters, notes, email, reports, diary entries & responses to current affairs
- **Culture** – gain an insight into the culture and history of French, Spanish or German society

What other subjects are connected to Modern Foreign Languages?

- Geography
- History
- Science
- English
- Home Economics
- Art
- Music

How will I learn Languages in school?

- Active participation in class
- Watching documentaries
- Audio-visual presentations
- Role plays and interviews
- Pair and group work
- Reading texts in the target language
- Take part in an exchange programme.

What careers are linked to Modern Languages?

- Tourism and Travel
- Translation and Interpretation
- Teaching
- Careers with an international or multinational dimension such as:
- Engineering
- Law
- Business
- Customer Service
- Information and Communication Technology (ICT)

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- Reports
- On-going feedback on oral work in class

How are Modern Foreign Languages useful to me?

Study of a modern language is useful in that it:

- gives you an insight to many different cultures and societies
- improves your communication skills – in both the MFL and English
- improves your career prospects
- improves your independent learning skills and your ability to learn other languages

How can I learn French/Spanish outside of school?

- Watch foreign language films/series
- Read foreign magazines and newspapers
- Watch documentaries on YouTube and TV
- Get a pen-pal
- Travel and use the language of the country on holidays

What is the French/Spanish exam like?

- The written exam is of 2hrs 30mins duration, a separate listening examination is of 40mins duration.
- Reading Comprehension
  (30% Higher Level & 40% Ordinary Level)
- Written Comprehension
  (25% Higher Level & 15% Ordinary Level)
- Listening Comprehension
  (20% Higher Level & 25% Ordinary Level)
- Oral Examination
  (25% Higher Level & 20% Ordinary Level)
- The oral examination takes place in March or April of 6th year

Subject Guide:
Biology

Biology is the science of life which focuses on living things, organisms, both the visible world of animals and plants as well as the invisible world of micro-organisms such as bacteria and viruses.

The Leaving Certificate course covers a number of branches of Biology.
These include botany – the study of plants; zoology – the study of animals; microbiology – the study of micro-organisms, as well as ecology, anatomy, physiology, embryology and biochemistry.

The Biology Course is split into 3 units:

Unit 1: The study of Life (e.g. food, ecology)

Unit 2: The cell (e.g. cells, enzymes, photosynthesis, genetics)

Unit 3: The organism (e.g. bacteria, blood, human breathing, excretion, senses, reproduction, plant responses)
Each area is studied in depth. The above is a sample of some of the topics.

What other subjects are connected to Biology?

- Geography
- Chemistry
- Home Economics
- Graph work in Maths
- Physical Education

How will I learn Biology?

- Active participation in class
- Linking the theoretical elements to the practical exams undertaken.
- Home study of class notes and answering exam papers
- Practical work within and out of the classroom
- Recording experiments into a Laboratory book

What careers are linked to Biology?

- Veterinary & Veterinary Nursing
- Health Care
- Environmental Management
- Education
- Biotechnology
- Forensic Science
- Beauty Therapy
- Biomedical Engineering
- Medicine / Doctor
- Lab Technician
- Nursing

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- End of terms tests and reports

How is Biology useful to me?

Biology is the study of life, it will allow you to:

- explore the diversity of life and the interrelationship between organisms and their environment.
- gain an insight into the function and role of Organisms.
- become aware of how humans use other living things and their products to enhance human health and the human environment.

How can I learn about Biology outside of school?

- Watch scientific documentaries on YouTube and TV.
- Read relevant newspaper articles on science research and its' findings.
- Visit science museums.
- Read relevant books about topics that are of interest to you.

What is the Biology exam like?

The exam is 3hrs long for both the higher and the ordinary paper

Section A: Short Questions; Answer 5 out of 6 questions, each carrying 20marks

Section B: Experiment Questions; Answer 2 out of 3 questions, each carrying 30 marks

Section C: Long Questions; Answer 4 out of 6 questions, each carrying 60 marks

Questions are taken from all sections of the course.

Subject Guide:
Chemistry

Chemistry is concerned with the structure and composition of materials and the changing of one substance into another. It is often referred to as the 'central science' as it bridges natural sciences, such as physics, geology and biology with each other. Everything around us is made up of chemicals from the foods we eat to the clothes we wear and the air we breathe. It influences our lives in many ways and is also concerned with improving health and increasing life expectancy.

The Chemistry course is designed to help students achieve a very good understanding of major chemistry concepts and develop laboratory techniques. It is regarded as a foundation course for students hoping to study science in third level colleges.

How will Chemistry be different after the Junior Certificate?

Chemistry continues on from the Junior Certificate course, however unlike the JC course, there are no marks awarded for the Mandatory Experiments. There is an increase in the mathematical content and students who did not study Junior Certificate honours maths should consult a science teacher before selecting Chemistry.

What will I learn in Leaving Certificate Chemistry?

- History of the atom
- History of the periodic table
- Titrations – Volumetric Analysis
- Organic families and their reactions
- Fuels, petrol and catalytic converters
- Environmental Chemistry
- Rates of reactions and chemical equilibrium
- Acid, Bases, pH and Indicators
- Bonding and how it affects our everyday lives

What other subjects are connected to Chemistry?

- Physics
- Biology
- Maths
- Geography

Chemistry is a subject that is associated with providing a range of exciting career opportunities in the Science field. The chemical industry represents an important economic activity in Ireland, especially in research and development. Chemistry places a huge emphasis on experimental work and scientific methods. If you are logical, observant and curious about the world around you.

How will I learn Chemistry in school?

- Active participation in class
- Hands on laboratory classes while completing experiments
- Calculations
- Manipulation and graphing of results
- Learning of definitions
- Problem solving
- Drawing diagrams

What careers are linked to Chemistry?

Analytical chemist • Atmospheric chemist • Biochemist • Biotechnologist • Chemical engineer Cosmetic scientist • Doctor • Environmental scientist • Food scientist / dietician • Materials scientist Formulation chemist • Health and safety advisor • Crystallographer • Forensics • Pharmacy Toxicologist • Vet • Dentist Marine scientist • Molecular biologist • Nuclear scientist • Patent attorney Med lab scientist • Research and development chemist

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- End of term tests and reports

What is the Chemistry exam like?

The exam is of 3 hrs duration
Section A: 3 experiment questions
Section B: 8 theory questions
Students must do at least 8 questions, with a minimum of 2 from section A

How is Chemistry useful to me?

Research carried out by the Association of Graduate Recruiters shows that employers put a high value on transferable skills such as;

- logical thinking
- team working
- communication
- problem-solving
- organisation
- time management

How can I learn about Chemistry outside of school?

- Pay attention to TV and newspaper articles about fossil fuels, greenhouse gases and carbon emissions
- Look at the ingredients in cosmetics, medicines, hygiene products, etc.
- Watch experiments on YouTube
- Cook or clean, chemistry is all around you in the home!
- Search science websites for up-to-date discoveries

It is recommended that students who wish to study Chemistry should have obtained an A or B in both Higher Level Science and Maths in Junior Certificate.

Subject Guide:
Physics

All science and technology has its roots in Physics as everything in the world, indeed the universe, can be explained through Physics. Without Physics you would not have your phone, tablet, 3D movies or microwaves. An understanding of physics helps to solve environmental, social, health and technological challenges.

To study Physics is to learn about and undertake practical work involving elementary particles, nuclei, atoms, molecules, solids, liquids, gases, complex systems, supercomputers, the atmosphere, planets, stars, galaxies, the universe itself and the energy which interacts with all of them. If you are curious about how things work and love solving problems then Physics is for you.

Note: a science subject (occasionally two) is a requirement for many third level courses in the medical, engineering and science areas.

How will Physics be different after the Junior Certificate?

The Leaving Certificate course follows directly from Junior Cert Science covering more topics in greater depth. The course is heavily based around experiments and you will learn how to accurately record and analyse results, and how to minimize and accommodate for experimental errors. You will learn how to think and work through problems logically to arrive at an answer. The laboratory experiments (120/400) and theory (280/400) will be tested in a terminal written examination.

What will I learn in Leaving Certificate Physics?

- Mechanics and Motion
- Temperature and Heat
- Waves, Sound, Light, Energy & Wave motion
- Optics, Reflection, Telecommunication
- Electricity and Magnetism
- Electrical transmission & safety
- Semiconductors, structure & function
- Atomic Physics and X-rays
- Nuclear and Particle Physics, Radiation

What other subjects is Physics connected to?

- Chemistry/Biology
- Maths
- Technology
- Applied Maths
- Construction
- DCG
- Geography

How will I learn Physics in school?

- Active participation in class
- Experimental work
- Data logging with digital sensors
- Analysing data and graphs
- Writing laboratory reports
- Class discussions
- Demonstrations in class/online/documentaries
- Online notes/questions/homework
- Using computer simulation software
- Class trips

What careers are linked to Physics?

- Engineering and technology
- Meteorology
- Software and Game design
- Physics Teacher/Lecturer
- Telecommunications
- Astrophysics
- Film, TV and Radio Production
- Telecommunications

The following courses have physics included in their first year modules
Medicine, radiography, Medicine, Physiotherapy, Midwifery, Nursing, Dental Science, Forensics, Architecture, Engineering.

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- Reports
- Ongoing feedback on laboratory write-ups

What is the Physics exam like?

The exam is of 3 hrs duration

Section A: Mandatory Experiments answering 3 out of 4 questions – 120 marks

Section B: In-depth questions answering 5 out 8 – 280 marks

How is Physics useful to me?

- The study of Physics helps to create an awareness of the environment, both built and natural.
- You will learn practical techniques and use modern scientific equipment.
- It teaches you to think logically and express your thoughts in a concise manner.
- You will learn to solve problems and think creatively.
- You will be able to use mathematics in real life situations.
- You will be able to observe events and ask sensible questions about them.

How can I learn about Physics outside of school?

- Science and technology articles in newspapers and magazines
- Google 'How stuff works'
- YouTube

It is recommended that students who wish to study Physics should have obtained an Honour in both Higher Level Science and Maths in Junior Certificate.

Subject Guide:
Applied Maths

Applied Maths is the study of practical applications of mathematics to the real world and physical problems. It is typically associated with engineering and physics but is also used in economics, finance, business, environmental studies, even chemistry and medicine. Applied Maths covers the mathematics behind the behaviour of objects when placed in various situations.

This subject is taught <u>after school</u> by a Summerhill College staff member who is currently completing his PHD in Mathematics. Providing this subject is dependent on demand.

How will Applied Maths be different after the Junior Certificate?

Applied Maths is only taught in the senior cycle. Students who chose to do Applied Maths often do physics as well due to the strong overlap between the two subjects.

It will also give you a better understanding of some parts of the higher level maths course especially trigonometry, calculus (differentiation and integration) and linear motion.

What will I learn in Leaving Certificate Applied Maths?

- Vectors
- Accelerated Linear Motion
- Newton's Laws and Connected Particles
- Impulses and Collisions
- Statics
- Circular Motion and SHM
- Differentiation
- Projectiles
- Relative Velocity
- Rigid Body Rotation

How will I learn Applied Maths in school?

- Active participation in class
- Class discussions
- Applying problem solving skills

What careers are linked to Applied Maths?

- Engineering and Technology
- Science – Physics, Mathematical Physics
- Physics Teacher/Lecturer
- Aerospace
- Finance and economics
- Investment management
- Mathematical modelling

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- Reports

What is the Applied Maths exam like?

- The exam is of 2.5 hrs duration
- You have to answer 6 questions out of 10.

How is Applied Maths useful to me?

- It teaches you to think logically and express your thoughts in a concise manner.

- You will learn to solve problems and think creatively.

- You will be able to use mathematics in real life situations.

- It is excellent for developing problem solving skills which are very valuable for future employment.

Subject Guide:
Agricultural science

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

What will I learn in leaving certificate agricultural science?

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, sheep, horse and pig
- Farm buildings
- Farm-house environment

What other subjects are connected to agricultural science?

- Biology
- Geography

How will I learn agricultural science in school?

- Active participation in class
- Experimental work
- Analysis of data and graphs
- Writing laboratory reports
- Farm visits
- Project work

What careers are linked to agricultural science?

- Horticultural
- Food science
- Green keeping
- Agricultural advisors
- Environmental science
- Forestry
- Farming
- Marine science
- Sports turf management
- Renewable energy
- Teaching

What is the agricultural science exam like?

The examination in agricultural science consists of
a) A terminal examination paper – 75%
b) An assessment of the work of the candidate during the course – 25%

Assessment will be 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

How can I learn about agricultural science outside of school?

- Take an active interest in local and national agri-industries
- Food industry visits
- Farm visits
- Listen to radio programmes such as Countryfile – RTE Radio 1
- Watch TV programmes such as 'Ear to the ground'
- Read newspapers such as 'The Farmers Journal' and 'The Farming Independent'.
- Contact organisations such as the IFA, Macra na Feirme

Subject Guide:
Art

Art is the process of human creativity and imagination.

How will Art be different after the Junior Certificate?

Art is a very popular choice for Leaving Certificate.
It expands on the Junior Certificate course with the added component of History & Appreciation of Art which is worth 37.5% at higher level and ordinary level.

What will I learn in Leaving Certificate Art?

- Painting
- Drawing
- Graphic Design
- Craft Pottery
- History and Appreciation of Art
- Modelling
- Life Drawing

What other subjects are connected to Art?

- English & languages
- History
- Science
- Maths
- Religion
- Woodwork
- Construction
- Music

How will I learn Art in school?

- Active participation in class
- Practical experience and exploration of different materials, approaches and applications of Art
- By further developing knowledge, understanding and skills acquired in Junior Cycle school trips

What careers are linked to Art?

- Artist, Craft Design Maker
- Architect, Advertising, Web Designer
- Film maker, Animator, Game and Multimedia Designer
- Urban Planner, Landscape and Interior Designer
- Museum Curator
- Primary & Secondary School Teacher
- Industrial Designer
- Photographer, Make-up Artist, Fashion Design

How will I be able to track my Progress?

- Feedback following class assessment
- Teacher-student interaction, personal critiques
- Continuous assessment
- Reports
- On-going feedback on project work
- Feedback from peers & school community

What is the Art exam like?

There are 4 exams in Art

- **Still Life / Imaginative Composition:** 2 ½ hrs: 100 marks
- **Design** (2 ½ hrs) or **Craftwork** (5 hrs): 100 Marks
- **Lift Drawing** (1 hr): 50 marks
- **History of Art and Appreciation** (2 ½ hrs written exam): 150 marks

The 3 practical components are examined in early May and the written exam is in June.

How is Art useful to me?

- The study of Art helps to create an awareness of the environment, both man-made and organic
- Helps to develop an understanding of various cultures and aesthetics
- Enables the student to understand and appreciate the creativity of others
- Helps students express themselves in visual form
- Helps with problem-solving, decision-making and develops reflection and analysis

How can I learn about Art outside of school?

- Visiting galleries and museums
- Keeping informed of fashions and trends and IT developments
- Watch art programmes on TV and YouTube
- Observe landscape, and architecture in the environment
- Watch how people express themselves through their visual appearance
- Keep a drawing/observational diary

Subject Guide:
Music

Music provides students the opportunity to expand their cultural and musical knowledge through the practice, composition and listening to a variety of musical disciplines and styles.

How will Music be different after the Junior Certificate?

Music at Leaving Certificate level is composed of three main sections – Practical (worth 50% and includes music technology and performance on one or two instruments), Listening (worth 25%) and Composition (worth 25%).

What will I learn in Leaving Certificate Music?

- Melody writing
- Composition
- Practical assessment
- Irish music
- 20th Century Music – Queen, The Beatles, Jazz, etc.
- Analysis of four orchestral works
- Music Analysis (describing music you hear)

What other subjects are connected to Music?

- English
- Irish
- Maths
- History
- Religion

What careers are linked to Music?

- Music producer
- Professional musician (e.g. in an orchestra)
- Music theatre or a band
- Music teacher
- Music publisher
- Music manager – event manager
- Musical director
- Music editor
- Music journalist for theatre & shows
- Sound technician
- Music librarian

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- Reports
- Ongoing feedback on laboratory write-ups

What is the Music exam like?

The music exam has four different components.

- **Listening [25%]** – Set works, Irish traditional music and Aural skills
- **Composition paper** [25%] – Melody composition & Harmony composition
- **Core Practical** [25%] – students complete a practical music exam before Easter of 6th year
- **Elective** [25% - Higher level only] - Students choose between listening, composition or practical

How is Music useful to me?

Study of music is useful to me in that it:

- develops my personality through an enhanced understanding of many different musical styles
- provides an opportunity to develop my creativity
- develops my critical and imaginative skills by utilising musical elements learned in class to analyse songs
- encourages my social awareness and understanding of the artistic views of others
- provides me with the opportunity to learn how to play a musical instrument

How can I learn about Music outside of school?

- Listen to a wide variety of musical styles, e.g. on radio, internet and CDs
- Attend church when there is a choir singing or musicians performing
- Take music lessons
- Attend live performances/concerts
- Many free events in your area broaden your music education
- Watch music documentaries on TV or YouTube

Subject Guide:
Geography

Geography develops an understanding of the changing relationship between physical and human surroundings. Each decision you make has consequences linked to an aspect of Geography; from your mode of transport to school to the choices you make as a consumer. Through the study of Geography students will develop skills that will help make informed decisions at local, national and international levels.

How will Geography be different after the Junior Certificate?

Geography is a very popular choice for Leaving Certificate. It expands on the Junior Certificate course with the added requirement of a Field Study which is worth 20% at higher level and 25% at ordinary level.

What will I learn in Leaving Certificate Geography?

- Weather forecasting
- Map Reading
- Photograph interpretation
- How the world around us was formed
- Where people live and why
- What type of jobs people work at
- The study of the movement of people

How will I learn Geography in school?

- Active participation in class
- Watching documentaries and accessing the Internet
- Field Trips and project work

What other subjects is Geography connected to?

- Science
- Maths
- Religion
- Business Studies
- Economics
- Art
- History
- English

What careers are linked to Geography?

- Urban Planning
- Surveyor, Cartographer, Ordinance Survey
- Climatologist, Geologist
- Park Ranger, Office of Public Works
- Naval service, GIS Analyst
- Tourism
- Teaching
- Environmental Resource Management, Recycling

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- Reports
- Feedback on project work and field study

What is the Geography exam like?

The exam is of 3 hrs 20 mins duration

- **Section One:** Short questions – 100 marks
- **Section Two:** Essay questions – 200 marks
- **Field Study** (20% Higher Level, 25% Ordinary Level)

The field study is submitted early in 6th year

Questions are taken from a broad spectrum of the course.

How is Geography useful to me?

- The study of geography helps to create an awareness of the environment, both built and natural
- Helps to develop an understanding of various cultures and economies
- Creates understanding of climates and regions
- Develops map reading skills and statistical analysis
- Incorporates project work and group work

How can I learn about Geography outside of school?

- Geographic events tend to be world news, so listen to and read reports of earthquakes, volcanoes, etc.
- Watch documentaries on YouTube and TV
- Observe landscape on walks and drives
- Watch the weather forecast

Subject Guide:
History

Senior Cycle History explores the Later Modern period from 1815 to 1993 in a European, Irish and world context. History gives us an understanding of the modern world. The students develop an appreciation of the society in which they live and other societies past and present. History develops students' analytical and interpretive skills while also promoting independent and critical thinking.

How will History be different after the Junior Certificate?

History is a very popular choice for Leaving Certificate. It expands on the Junior Certificate course with the added requirement of a research project which is worth 20% at higher level and 20% at ordinary level. The website www.hist.ie provides a comprehensive overview of the course

What will I learn in Leaving Certificate History?

- Modern Ireland 1815-1993
- Modern Europe 1815-1992
- United States and the wider world 1945-1989

Students develop skills in research, analysis, evaluation, synthesis and essay writing. During the course, students are required to appreciate concepts that are fundamental to the study and writing of History e.g. source/evidence, bias/objectivity, fact/ opinion and cause/consequence.

What other subjects are connected to History?

- English
- Economics
- Art
- Geography
- Religion

How will I learn History in school?

- Active participation in class
- Watching documentaries and accessing the Internet
- Research on the internet
- Tours and project work

Ordinary Level) Submitted in 6th year and can be on any topic of historical significance.

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- Reports
- Ongoing feedback on project work and research study
- Pre- Leaving Certificate Examination

What is the History exam like?

The exam is of 2hrs 50mins duration

- **Section 1:** Document based questions – 100 marks
- **Section 2, 3, 4:** Essay(Higher)/Paragraph (Ordinary) based questions – 300 marks
- **Research Project** (20% Higher Level, 20%

How is History useful to me?

- Helps develop understanding of the contemporary world through the study of the past.
- Helps to develop and make an argument.
- Develops conceptual understanding and the ability to think independently and critically.
- Develops an appreciation of the society in which they live and other societies past and present.
- Develops document reading skills.
- Incorporates project work and group work

How can I learn about History outside of school?

- Watch current affairs/news programmes.
- Watch documentaries on YouTube and TV.
- Observe/visit historical sites.
- Internet research.
- Visit local and national museums

What careers are linked to History?

- Journalism
- Law
- Diplomacy
- Business
- Civil service
- Politics
- University lecturer
- Tourism
- Archaeologist
- Teaching
- Historian

Extra-curricular reading is required to develop the student's understanding of course material.

Subject Guide:
Religious Education

Religious Education requires students to engage in the exploration of a range of issues e.g. nature of morality, principles of a just society and the diversity of belief. Students will develop the ability to articulate their faith experience and to engage in dialogue with those of different faiths.

How will Religious Education be different after the Junior Certificate?

Religious Education expands on the Junior Certificate syllabus. Students are encouraged to take an active role in discussion and to explore their own views and beliefs. The structure of the course allows students to explore current issues. Students are required to complete a course work journal which accounts for 20% of the overall result.

What will I learn in Leaving Certificate Religious Education?

- The Search for Meaning & Values Christianity
- World Religions
- Religion & Gender
- Issues of Justice & Peace
- The Bible: Literature & Sacred Text
- Religion: The Irish Experience

What other subjects are connected to Religious Education?

- English
- Music
- History
- Science
- Art
- Geography
- Home Economics

How will I learn Religious Education in school?

- Active participation in class
- Group work and pair work
- Classroom discussion
- Use of internet resources
- Through use of critical thinking skills and reflective searching

What careers are linked to Religious Education?

- Teaching – primary and post-primary
- Media
- Diplomacy
- Counselling
- Law
- Human Resources

What is the Religious Education exam like?

- The Honours Level paper is 2.5 hours long & the Ordinary Level paper is 2 hours long.
- Candidates must answer questions from 4 sections of the course.
- Honours students are required to write developed essay style answers.
- Ordinary Level students are required to answer through paragraphs rather than essays.

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- School Reports

How is Religious Education useful to me?

- Religious Education can contribute to the development and enrichment of a person. This can be achieved through an appreciation of other faith traditions and beliefs.

- The course of study can assist the student reflect on their own human and life experiences. Such experiences can be interpreted and understood though considered reflection.

How can I learn about Religious Education outside of school?

- Involvement in local parish.
- Novels, dramas, music and films which reflect on moral, ethical & religious issues.
- Observe national and international media related news items which relate to moral and ethical issues.
- Follow national referendum debates which involve state & religious perspectives

Religion is a personally enriching subject which helps the learner to function effectively in a complex, pluralist culture. It is fully recognised by CAO, UCAS and other entry bodies into third level education and merits the same points as other Leaving Certificate subjects.

Subject Guide:
Home Economics (Social & Scientific)

Home Economics is an applied subject combining theory with practice in order to develop an understanding of the key areas of individual and family life. The course of study is primarily focused on diet, lifestyle, nutrition and health matters, as well as consumer and social awareness.

How will Home Economics be different after the Junior Certificate?

Home Economics builds on the content of the Junior Certificate programme with the added requirement of a practical coursework journal which is worth 20% at both higher and ordinary levels.

The syllabus consists of Core and Three electives. The Core covers three areas: Food Studies (45%), Resource Management (25%), and Social Studies (10%). There are three electives to choose one from: home design and management, textiles fashion and design or social studies. Each elective is worth 20%.

What will I learn in Home Economics?

- Food Science and Nutrition
- Diet and Health
- Food Commodities & their role in health
- Food processing and packaging
- Family Resource Management
- The Family in Society
- Social issues & how they affect families
- Microbiology & Food Safety
- Practical food preparation skills

What other subjects are connected to Home Economics?

- Science
- Maths
- English
- Business Studies
- Accounting
- Art
- S.P.H.E.

How will I learn Home Economics in school?

- Active participation in class
- Assignment work
- Practical cookery
- Demonstrations
- Group Work/Peer teaching
- Audio Visual
- Field trips

What careers are linked to Home Economics?

- Home Economics Teaching
- Health promotion
- Dietetics and Nutrition
- Consumer advice
- Hotel and Catering Industry
- Bakery/Cake design/Pastry arts
- Fashion Industry
- Chef
- Interior Design
- Childcare/Community care/Sports nutrition

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- School Reports
- On-going feedback on practical food studies journal.

exam like?

The exam is of 2hrs 30mins duration

- **Section One:** Short questions – 60 marks
- **Section Two:** Q1. Compulsory question 80 marks, Two Core Q.'s 50 marks each,
- **Elective** 80 marks.
- **Practical Food Studies Journal** (20% Higher Level, 20% Ordinary Level)

The journal is submitted early in 6th year
Questions are taken from a broad spectrum of the
Course

How can Home Economics be useful to me?

- Helps to create an awareness of the importance of a healthy diet and lifestyle, as well as the role of foods in disease prevention, health promotion & physical fitness.
- Develops life skills in food preparation and food safety.
- Illustrates the economic significance of the food industry & importance of promoting food enterprises.
- Helps to develop Consumer and Family Resource Management Skills including money management, consumer rights awareness and environmental sustainability.
- Creates understanding of the Family and the Society we live in.

What is the Home Economics

How can I learn about Home Economics outside of school?

- H.S.E. Health Promotion Campaigns
- Farmers Journal Home Economics supplement
- Watch documentaries and cookery programmes on YouTube and TV
- Food and Consumer magazines
- Exhibitions /farmers markets /food demonstrations.

Subject Guide:
Politics & Society

A new specification for Politics and Society was launched on 1st February 2016 and was introduced in a small number of schools in September 2016. Politics and Society aims to develop the student's ability to be a reflective and active citizen, in a way that is informed by the insights and skills of social and political science. It is a full Leaving Certificate subject, requiring the same amount of class time as all other subjects.

The focus of Politics and Society, in part, corresponds to that of other senior cycle subjects, notably geography, home economics, history, and religious education, and, to a lesser extent, economics (in the areas of economic systems and economic thought), English (in relation to social and media literacy), mathematics (in relation to the ability to interpret and analyse data) and technology (in relation to technology and society).

***Summerhill College will make this subject available depending on interest among students.**

How will Politics & Society be different after the Junior Certificate?

Civic, Social and Political Education (CSPE), integrated into the Wellbeing programme, provides a foundation in the knowledge, skills and attitudes required for studying Politics and Society at senior cycle as do other curriculum areas including history, geography, languages and religious education.

What will I learn in Leaving Certificate Politics & Society?

The objectives of Leaving Certificate Politics and Society are to develop

- an understanding of the social systems within which people act: locally, nationally and more widely
- an understanding of concepts which underpin contemporary systems of government and of the diverse models for making these concepts operational
- an understanding of and a respect for human rights and responsibilities, for human dignity and for democratic modes of governance
- an understanding of and a respect for sustainable development
- a commitment to and a capacity for active participation in the learners' social and political worlds
- a commitment to and a capacity for critical, discursive and independent thinking
- a commitment to and a capacity for engagement in peaceful and democratic means of resolving conflicts
- a sense of care for others and a respect for and a valuing of diversity in all areas of human life within the parameters of human rights principles

What other subjects are connected to Politics & Society?

- English
- History
- Geography
- Home Economics
- Economics
- Religion

How will I learn Politics & Society in school?

- Active participation in class
- Group work and pair work
- Classroom discussion
- Through use of critical thinking skills

What careers are linked to Politics & Society?

- Journalism
- Media
- Social Work
- Political Analysis
- Law

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- School Reports

What is the Politics & Society exam like?

Section 1 (Short answer questions) active citizenship, human rights and responsibilities and globalisation and localisation.

Section 2 (Short answer and extended response questions on a data-based case study) allows the candidate to be assessed in relation to their skills of thinking critically and independently; of analysing and interpreting qualitative and quantitative social and political research data; and of using such data carefully in coming to conclusions. Those being assessed at Higher level will also be assessed on their capacity to come to conclusions by drawing on their wider knowledge from the study of Politics and Society of power and decision-making, active citizenship, human rights and responsibilities and globalisation and localisation.

Section 3 (essays) allows for the knowledge of the candidate to be assessed in relation to power and decision-making, active citizenship, human rights and responsibilities and globalisation and localisation as well as their skills in critical, discursive and independent thinking and in using qualitative and quantitative data carefully in coming to conclusions.

Subject Guide:
Accounting

Doing accounts is an important part of your life. Each decision you make has financial consequences; from your household budget to calculating the profit made in your business.

How will Accounting be different after the Junior Certificate?

Accounting expands on the Junior Certificate Business Studies Book-keeping element and introduces new terms such as published accounts, tabular statements, incomplete records, suspense accounts and costing. Accounting requires continuous practise of questions.

What will I learn in Leaving Certificate Accounting?

- Final Accounts of a Sole Trader, Company
- Cash Flow Accounts
- Adjustments to accounts
- Published Accounts
- Control Accounts
- Accounts from incomplete records
- Suspense Accounts
- Analysis of accounts
- Farm accounts
- Management Accounting
- Club and Service Firms

What other subjects are connected to Accounting?

- Maths • Business
- Economics • ICT

What careers are linked to Accounting?

- 3rd Level Degrees
- Advertising
- Accountant
- Auctioneering
- Teaching
- Actuary
- Financial Advisor/ Consultant Banking
- Insurance
- Tax Advisor/Consultant

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Reports
- On-going feedback using marking scheme

What is the Accounting exam like?

The exam is of 3 hours duration at Higher and Ordinary Level

Higher Level and Ordinary Level
Section 1 - Financial Accounting [30%]
Section 2 - Financial Accounting [50%]
Section 3 - Management Accounting [20%]
Questions are taken from a broad spectrum of the
Course

How is Accounting useful to me?

- The study of accounting helps to develop an analytical mind for the student
- Helps to develop an understanding of various accounting concepts
- Creates understanding of various book-keeping procedures
- Develops mathematical skills and statistical analysis
- Incorporates pair work and group work

How can I learn about Accounting outside of school?

- Participate in work experience in an accounting firm
- Read the business section of the newspapers
- Watch the business section of the news to keep up to date with current events

Subject Guide:
Business

Business is an important part of your life, from understanding how to set up your own business to understanding key aspects of business concepts such as your consumer rights and calculating your taxes.

How will Business be different after the Junior Certificate?

Business is a very popular choice for Leaving Certificate. It expands on the Junior Certificate course by introducing the concepts of enterprise (setting up your own business) and management (running your own business). Case studies are examined at Higher Level and account for 20% of the subject.

What will I learn in Leaving Certificate Business?

- People in business
- Enterprise
- Management Skills & Activities
- Financing a business
- Identifying opportunities
- Marketing
- Business, Economy & Government
- Insurance & Taxation
- Business Expansion
- Community Enterprise Development
- Business Ethics & Social Responsibility
- International Trade
- The European Union

What other subjects are connected to Business?

- Economics
- Geography
- Home Economics
- English

How will I learn Business in school?

- Monitor current business trends
- Active participation in class
- Discussion about contemporary business issues
- Project work

What careers are linked to Business?

- Accountant
- Banking
- Tax consultancy
- Insurance agency
- Marketing
- Entrepreneurship
- Management
- Teaching

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- Reports
- Ongoing feedback on project work/case studies

The exam is of 3 hours duration at higher level and
2.5 hours at ordinary level
Section 1 Short Questions 20%
Section 2 Case Study 20%
Section 3 Long Questions 60%
Ordinary Level
Section 1 Short Questions 25%
Section 2 Long Questions 75%
Questions are taken from a broad spectrum of the
Course

What is the Business exam like?

How is Business useful to me?

- Helps to develop an understanding of setting up and running a business
- Creates an understanding of finance, insurance and taxation
- Develops business skills and statistical analysis
- Incorporates project work and group work
- Encourages and promotes an enterprise culture e.g. setting up your own business

How can I learn about Business outside of school?

- Business events tend to be world news, so listen to and read reports on the world economy
- Engage in giving advice on your rights as a consumer and employee
- Watch documentaries on YouTube and TV
- Observe businesses in action in the local community
- Watch the business news on TV. Read business supplements in newspapers

Subject Guide:
Economics

New Leaving Certificate Economics Course

Leaving Certificate Economics aims to stimulate students' curiosity and interest in the economic environment and how they interact with it. It develops a set of skills, knowledge and values that enables students to understand the economic forces which affect their everyday lives, their society and their economy at local, national and global levels, making them more informed as decision makers. Economics is a subject with which you are already familiar. Each day t.v., radio and newspapers direct our attention to a wide range of economic issues: unemployment and job creation: inflation; the EU; EMU and the EURO; Third World issues; taxation; interest rates; government economic policies and the performance of the economy.

How will Economics be different after the Junior Certificate?

The Economics course studies expands upon areas already covered in Junior Certificate Business e.g. production, banking, inflation and international trade. New areas of study are also introduced at Leaving Certificate level e.g. market structures, demand and supply, role of government and National Income.

What will I learn in Economics?

The study of Economics is divided into two sections:

Microeconomics studies the purchasing behaviour
of individuals and how this affects the marketing of particular products. It deals with supply and demand, while showing how many goods will be purchased and consumed at given market prices and times.

Macroeconomics is the study of the entire economy in broad terms e.g. the total income in the economy and the total level of employment.

What other subjects are connected to Economics

- Business
- Home Economics
- Geography
- English
- History

How will I learn Economics in school?

- Active participation in class
- Group work and pair work
- Classroom discussion
- Through use of critical thinking skills
- Accessing business related website

What careers are linked to Economics?

- Economist
- Investment Analyst
- Market Research Analyst
- Management Consultant
- Banking Credit Analyst
- Financial Controller
- Journalist
- Teacher/Lecturer

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment

What is the Economics exam like?

Both the Higher level and Ordinary level exam papers are 2½ hours long.

- **Written exam 80%**
- **Class Based Research Study 20%**

What will I learn?

- understand the economy within which people act locally, nationally and globally
- appreciate the ethical, historical, social and environmental dimensions of economics, and reflect on how economics contributes to the social and political development of society
- Build their knowledge and understanding of economic terminology, concepts and principles, and develop the skills needed to apply this knowledge and understanding to familiar and unfamiliar situations.
- Develop skills in critical and creative thinking around contemporary economic, political and social issues, while appreciating different perspectives, and providing informed solutions to a problem.
- research and analyse qualitative and quantitative economic information and data from various sources, present and justify conclusions and make informed decisions
- Discuss, explain and communicate the outcomes of their analysis and activities in verbal, graphical and other forms, using technology where appropriate.

How can I learn about Economics outside of school?

- Watch TV business reports and review relevant Irish economic statistics on www.cso.ie
- Read national business supplements about recent economic developments.

For More information please see:
https://curriculumonline.ie/Senior-cycle/Senior-Cycle-Subjects/Economics

Subject Guide:
Leaving Certificate Vocational Preparation (LCVP)

The Leaving Certificate Vocational programme is an enhanced Leaving Certificate with a strong vocational focus. LCVP can be taken as an extra subject outside of the normal seven subjects. Students study two Link Modules (Short Courses). The Link Modules are:

1. Preparation for the World of Work
   - Introduction to Working Life
   - Job-seeking Skills
   - Career Investigation
   - Work Placement
   - Enterprise Skills
   - Local Business Enterprises
   - Local Voluntary Organisations / Community Enterprises
   - An Enterprise Activity

2. Enterprise Education

The examination for the LCVP Link Modules consists of two essential parts:

- **Portfolio worth 60% of the final marks**. (This will be submitted in early March of 6th year.)

Core Items	Optional Items (must do 2 of 4)
Curriculum Vitae	Diary of Work Experience
Career Investigation	Enterprise Report
Summary Report	Report on My Own Place
Enterprise / Action plan	Enterprise / Action Plan

- **Terminal examination worth 40%** of the final marks.

(Usually held during the 1st week of May in 6th year.)

LCVP students receive the **same** certificate as other Leaving Certificate students but their certificate includes an additional statement showing the results of the Link Modules examination.

- A **pass** grade in LCVP requires an overall mark of **50% - 64%** and is worth **28** points.
- A **merit** grade in LCVP requires an overall mark of **65% - 79%** and is worth **46** points.
- A **distinction** grade in LCVP requires an overall mark of **80% - 100%** and is worth **66** points.

These points can be used as one of their best six results in the Leaving Certificate. However, LCVP cannot be used for entry requirements to third level institutions. if students are not studying a modern foreign language as one of their Leaving Certificate subjects, they are required to complete a non-examinable module in a modern foreign language. Work experience is also a requirement for this programme.

Student must have specific subject combinations in order to be eligible to apply for this programme.

Vocational Subject Groupings (VSGs) 2019/2020

Specialist Groupings

1. Construction Studies; Engineering; Design and Communication Graphics; Technology - **Any Two**

2. **Physics and** Construction Studies **or** Engineering **or** Technology **or** Design & Communication Graphics

3 **Agricultural Science and** Construction Studies **or** Engineering **or** Technology **or** Design & Communication Graphics

4 **Agricultural Science and** Chemistry **or** Physics **or** Physics/Chemistry

5 Home Economics; Agricultural Science; Biology - **Any Two**

6 **Home Economics and Art** - Design Option **or** Craft Option

7 Accounting; Business; Economics - **Any two**

8 **Physics and Chemistry**

9 **Biology and** Chemistry **or** Physics **or** Physics/Chemistry

10 **Biology and Agricultural Science**

11 **Art** - Design Option or Craft Option **and Design & Communication Graphics**

Services Groupings

12 Engineering **or** Technology **or** Construction Studies **or** Design & Communication Graphics **and** Accounting **or** Business **or** Economics

13 **Home Economics and** Accounting **or** Business **or** Economics

14 **Agricultural Science and** Accounting **or** Business **or** Economics

15 **Art** Design or Craftwork Option **and** Accounting **or** Business **or** Economics

16 **Music and** Accounting **or** Business **or** Economics

Subject Guide:
Engineering

Engineering represents a study of a wide range of mechanical engineering materials, processes and technological applications. Engineering is a branch of science and technology concerned with the design, building, and use of engines, machines, and structures. An engineer is a professional with a broad scientific knowledge who applies this knowledge in a practical, creative and innovative way. Engineers are experts in technology. They design and produce solutions to society's demands.

How will Engineering be different from Metalwork after the Junior Certificate?

Engineering continues from Junior Certificate with a much more in depth look at manufacture and
design continuing with a Design and Make Project forming part of the final exam. The course content continues to be science and technology based with the goal of preparing students for a variety of first year Engineering degree courses.

What will I learn in Leaving Certificate Engineering?

- Safety in a Manufacturing environment
- Materials Science
- Polymer technology
- Machining
- Computer Aided Design/Manufacture
- Joining of materials
- Special topic each year
- Design and realisation

What other subjects is Engineering connected to?

- Physics
- Chemistry
- Maths
- Applied Maths
- Design and Communication Graphics
- Technology
- Construction Studies
- Business Studies
- Economics
- Art
- History
- English

How will I learn Engineering in school?

- Active participation in class
- Completion of class projects
- Annual special topic

- Field trips to relevant industries
- Video tutorials and demonstrations
- Design and realisation of personal projects

What careers are linked to Engineering?

- Manufacturing Engineering
- Mechanical Engineering
- Electrical Engineering
- Production Management
- Industrial Design
- Environmental engineering
- Biomedical Engineering
- Teaching and many more.

How will I be able to track my progress?

- Feedback following class tests and practical exercises
- Teacher-student interaction
- Continuous assessment
- School Reports
- Completion of class projects and research exercises.

What is the Engineering exam like?

The exam is of 3hrs duration

- **Section One:**
  Higher level Short questions – 50 marks
  Special topic 50 marks.
  Ordinary level – 65 marks
- **Section Two:**
  Higher level Topic questions – 200 marks.
  Ordinary level Topic questions – 135 marks
- **Project November – March** 150 marks
- **6 hour practical exam** May final year
  150 marks (Common level)

How is Engineering useful to me?

- The study of Engineering helps to create an awareness of the technology and its importance to us.
- Creates understanding of machines materials and mechanisms and there uses in the world around us.
- Develops and challenges student creativity and problem solving abilities as well as critical analysis.
- Incorporates teamwork and group planning to complete and improve task.
- Helps to develop an understanding of electrics /electronics and how they aid us in everyday life.

How can I learn about Engineering outside of school?

• Engineering tends to surround us in everything we do on a daily basis, observation while living as well as looking at how things might be improved are essential aids outside of school.
• Engage in fixing and taking apart simple machines at home that are no longer working.
• Watch documentaries on YouTube and TV
• Look at the internet to find information and other solutions to problems you have been set.
• Take an interest in new technologies and see what can be achieved once imagined

For more information, please refer to www.summerhillengineering.com

Subject Guide:
Construction Studies

Construction studies is the study of building and the built environment. It is not a continuation of Junior Cert woodwork although it does involve an element of woodworking within the syllabus. Generally students taking Construction have completed the Junior Cert woodwork course. Students study the knowledge and skills involved in Construction Technology and Construction Materials and Practices, through theoretical study and integrated practical projects.

Subject Content

The subject can be broken down into three parts.
1. A practical project and portfolio worth 25% of the total mark and completed in 6th year.
2. A 4 hour practical woodwork exam worth 25%.
3. A theory examination worth 50%.

What will I study in class?

- Learn how typical Irish houses are built including areas such as Planning Permission, foundations, plumbing and heating.
- Draw Building Details to scale.
- Learn woodwork skills
- Learn about recycling, green homes and renewable energies.

How will my class time be broken down?

- In 5th year students learn to draw elements of a building to scale, written theory and practical woodwork classes.
- Drawings are done with a board, tee square and drawing equipment.
- In 6th year a large part of class time is spent making the project and portfolio. The project must be the students own design and work

What careers are linked to Construction?

- Architecture
- Mechanical, Structural or Construction Engineering
- Practical trades such as Carpenter, Plumber, Electrician
- Building Surveyor
- Quantity Surveyor
- Building Technician
- Interior Designer
- Cabinet maker
- Furniture Designer

How will I be able to track my progress?

- Feedback following class tests
- Teacher-student interaction
- Continuous assessment
- School Reports

What is the Construction exam like?

- The exam is 3 hours long at Higher level and 2½ hours at Ordinary level
- The first question on each paper is a compulsory drawing question that involves drawing part of a building to scale using a board, tee square and drawing equipment.
- The remaining questions are based on written and drawn subject matter taken from the theory section of the syllabus. Higher level students answer 4 more questions, ordinary level must complete 3 more questions.

What does a typical project involve?

- The project must be the student's own design and accompanied by a portfolio which details the process.
- Students must choose to complete a project from one of the following areas of study:
- A craft based project, for example, a chair or table
- A project on the built environment or built Heritage.
- A building science project, for example, a solar panel or green energies project.

How can I learn about Construction outside of school?

- Watch TV documentaries on the Discovery Channel
- Observe building work in the local community
- Read local and national publications.

Subject Guide:
Design & Communication Graphics (DCG)

Modern product development depends heavily on technology to design and create the objects that are all around us. Design and communication graphics is a problem solving based subject that uses the technologies to develop spatial awareness and design skills. It has two distinct areas of study, a Descriptive Geometry section (60% Terminal Examination) where spatial problems involving solids and shapes are solved using pencil technical drawings, and the Student Assignment (40% Project) where students use sketching and Computer Aided Design to create an accurate computer visualisation of both an existing product and a new product that the student creates.

How will DCG be different after the Junior Certificate?

DCG builds on the knowledge acquired in the Junior Certificate Technical Graphics course with the addition of a course assignment or project which is worth 40% at both higher level and ordinary level.
The Geometry is more in-depth and develops spatial ability to a high level. Students have the opportunity to learn Computer Aided Design and will produce and manipulate high quality complex solid models as well as developing freehand drawing skills.

Subject Elements:
The subject has three areas of study.

- The "core" of plane and solid geometry,
- A choice of two of 5 modules of Applied Graphics
  (The core and modules are examined in the terminal examination)
- The Student Assignment; which is done in school between September and Christmas of the Leaving Certificate year and submitted to the State Examinations Commission in January.

What will I learn in Leaving Certificate DCG?

- Descriptive Geometry including Solids in Contact, Conic Sections, Perspective and Axonometric Projections, Intersecting solids.
- Two Applied Graphics modules from the following five; Assemblies, Geologic Geometry, Surface Geometry, Mechanisms and Structural forms.

• Communication of design & graphics including freehand drawing
• 3D Parametric Modelling (SolidWorks)

What other subjects are connected to DCG?

• Maths
• Engineering
• Art
• History
• English
• Technology
• Construction Studies
• Business
• Chemistry
• Physics

How will I learn DCG in school?

• Drawing in class using Board and T Square.
• Using Computers to create CAD models.
• Use of Desktop Publishing Software
• Independent study and practice
• Group work/assignments
• Peer Learning

How will I be able to track my progress?

• Feedback following class tests
• Teacher-student interaction
• Continuous assessment
• School Reports
• On-going feedback on project work

What is the DCG exam like?

The exam is of 3hrs duration
Section A (Core) 3 of 4 Short questions
20 marks each =60 marks
Section B (Core): 2 of 3 Long Questions
2x45 marks = 90 marks
Section C: (Applied Graphics) 2 of 5 questions
Questions combine areas of the course.
Student Assignment (40%)
The Student Assignment is done in class time between September and Christmas of 6th year.
The project is different every year

What careers are linked to DCG?

• Industrial Design
• Engineering, Civil Mechanical and Electrical
• Architecture
• Production Management
• Graphic design
• Product Design
• Medical device design
• Virtual Reality development
• Computer Graphics
• Animation
• Computer Game Design
• Product Development
• Computer Graphics.
• Tool Design
•Teaching

How is DCG useful to me?

• Develops spatial ability to a high level.
•Promotes engineering design awareness.
• Assists learners to communicate design.
• Develops time management skills.
• Provides experience of project work.
• Develops presentation skills.
• Uses I.T. skills to an advanced level.
• Develops research skills.
• Improves presentation techniques
• Using ICT and CAD Software.
• Project work can be used as portfolio.

How can I learn about DCG outside of school?

- Web research
- Use of CAD and drawing at home.
- Sketching and Drawing
- Work experience during summer

Possible Subject Combinations: A Rough Guide

The following subject combinations are merely a guide to particular areas of further study. They are not prescriptive. It is incredibly important before choosing a subject that each student researches their area of interest. It is also important that students seek the advice of teachers relating to their ability in a certain subject. If a student is very unsure what area they would like to pursue in the future, please make sure to keep options open, perhaps by choosing a language, a business subject, a science subject and a practical subject.

Psychology English Maths Irish Language Biology Business / Economics Another subject	**Pharmacy** English Maths Irish Language Chemistry Biology Another subject	**Social Science** English Maths Irish Language Geography Economics / Business Another subject	**Architecture** English Maths Irish Language Physics Art DCG
Law English Maths Irish Language History Business Another Subject	**Business** English Maths Irish Language Accounting Economics Another subject	**Science** English Maths Irish Chemistry /Physics Biology Language Another subject	**Primary School Teaching** English Maths Irish Biology Language Geography/History/Religion Another subject
Veterinary English Maths Irish Chemistry Ag Science /Biology Language Another subject	**Computer Science** English Maths Irish Language Physics DCG Another subject	**Medicine** English Maths Irish Language Chemistry/ Biology /Ag Science Another subject	**Hotel Management** English Maths Irish Language Business Home Economics Another subject
Dentistry English Maths Irish	**Agricultural Science** English Maths Irish	**Physiotherapy** English Maths Irish	**Engineering** English Maths Irish

Language Chemistry Physics / Biology Another Subject	Ag science Biology Business Another subject	Language Biology Physics / Chemistry Another subject	Physics Engineering / Chemistry DCG Another subject