

## Course overview

Engineering promotes an educational understanding of the materials and a knowledge of the processes associated with mechanical engineering. This is achieved through the development of skills and initiative in the planning, development and realization of technological projects in a safe manner.

You would really have to have done Junior Certificate Metalwork to have a good idea as to what is involved in Engineering. There is a good mix of theory and practice involved in these subjects. Many students enjoy the practical aspect but are not too happy when it comes to the theory. You will have to present a project as part of the Leaving Certificate examination, so talk to the teacher involved so that you know exactly the balance between the theory and practical aspect in this subject.

[https://www.education.ie/en/Schools-Colleges/Information/Curriculum-and-Syllabus/Senior-Cycle-/Syllabuses-and-Guidelines/lc\\_engineering\\_sy.pdf](https://www.education.ie/en/Schools-Colleges/Information/Curriculum-and-Syllabus/Senior-Cycle-/Syllabuses-and-Guidelines/lc_engineering_sy.pdf)

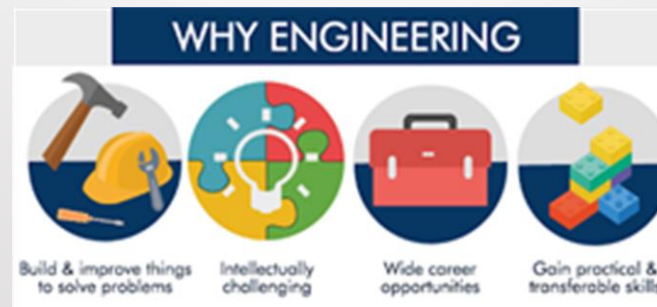
# St Tiernans CS Engineering

Leaving Certificate Engineering is the study of mechanical engineering and the students develop the skills and initiative in the planning, development and realization of technological project in a safe manor



This practical subject gives students hands-on experience working with tools and machinery.

Students also undertake theoretical and background work for their final examinations which provides the students with useful skills for those considering working in the sector



## Exam structure

Engineering is assessed at both Ordinary level and Higher level by means of an examination paper, a student project and a practical examination.

## Course content

- Health and Safety
- Bench work
- Classification and origin of metals
- Structure of metals
- Iron and steel
- Non-ferrous metals
- Heat treatment of metals
- Fabrication and finishing of metals
- Corrosion of metals
- Plastics processing
- Machining
- Materials and Technology
- Materials testing
- Joining of materials
- Metrology
- Manufacturing processes
- Technology



## Workshop Process

This section represents all the practical processes, which may be applied in the school workshop integral with the related theory. This section carries 300 marks in the exam at both levels. Ordinary & Higher: There will be 150 marks for a practical exam and 150 marks for assessment of workshop/laboratory work and projects.



## Materials & Technology

This section represents the wider knowledge and technology as a whole. In the written exam, this section will carry 200 marks at Ordinary level and 300 marks at Higher level.



## Career Possibilities

Engineering is useful for the following careers:

- Mechanic
- Panel Beater
- Welder
- Plumber
- Electronic and Mechanical Engineering
- Architecture
- Aircraft Technician
- Army/Air Corps
- Industrial Design

