The wide range of subjects covered in the core programme provides students with a sound theoretical understanding of all the different aspects of engineering science, providing them with the tools needed to tackle the complex, multidisciplinary problems faced by modern engineers. This is confirmed by the fact that engineers from the École Centrale de Lyon have risen to the highest levels in all areas of the engineering profession, both in France and abroad.

25% of student work in each module takes the form of independent study, either individually or in small groups, to develop the capacity to work independently and to take the initiative.

An important element of the teaching in these core modules is the importance given to work in small groups, both in the many laboratory classes associated with each module and in the student projects, which are also designed to provide hands-on training in project management.

Students from partner institutions can register for this semester (within the Erasmus programme, for example) and follow a selection of taught courses designed to offer an insight into the many and varied applications of engineering science. Several advanced courses on subject of general interest are also offered, in collaboration with our partners in the Collège des Hautes Etudes Lyon Science (Lyon Advanced Study Institute) including, for example course on political science, musicology, veterinary science and fundamental physics.
At the École Centrale de Lyon, students follow a core program for three semesters, followed by three semesters of optional subjects.

To be awarded their degree, students must:
- Spend at least four semesters under the school’s supervision,
- Demonstrate proven work experience of at least six months.

The course is divided into semesters, making exchanges easier:
The first three semesters consist of 12 taught modules, and provide the range of key skills and knowledge needed by all engineers.
The following three semesters provide the student with an introduction to a specific branch of the engineering profession and an opportunity to study a diverse range of applications of engineering science.

As well as this training, students gain first-hand, in-depth workplace experience by attending seminars, visiting factories, and taking part in six months of work experience.

Each engineering student is fully involved in his own training. Students build their course by choosing from the many opportunities available.

Students also have the possibility to register for in of the many Masters degrees offered by The École Centrale de Lyon in partnership with other establishments in Lyon.
Engineering students at École Centrale de Lyon have a choice of 10 modern languages:

- German, English, Arabic, Chinese, French as a foreign language, Italian, Portuguese, Russian, Japanese, Spanish.

All students must study at least one foreign language from those proposed during their course, and may potentially choose 2 or 3.

To obtain the degree, every student must reach a minimum level of English (at least 550 points on the ITP, 79 on the TOEFL IBT, 750 points on the TOEIC or 6.5 points on the IELTS).

Non-French speaking students doing a joint degree or students who enjoy special conditions for linguistic reasons must obtain the DELF (French language studies diploma) level B2.

### Professional training for Engineers (UE pro)

The UE PRO allows students to discover the engineering profession through lectures, site visits, interviews, projects and internships in industry, and helps them make use of all this information in defining their professional project.

All students must do a 4 week work experience placement after the first year and a 3 month work experience placement as a first introduction to engineering work.

Project management skills are taught through hands-on experience acquired in two group student projects, which run throughout the core programme.

All students must participate in some form of sporting activity or physical exercise, where the aims are both to develop the capacity to work as part of a team, and to encourage students to challenge themselves so as to discover their full potential.

### Modern languages taught module

### Taught modules in engineering science, economics and humanities

- Electrical energy and systems control
- Fluid, Mechanics and Thermodynamics
- Mechanical engineering
- Information technology
- Materials engineering
- Mathematics
- Solid and structural mechanics
- Physics and chemistry of materials
- Economics and management
- Human and social sciences
- Information sciences and technologies
- Specialization