

★ The modern languages taught module

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.

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

Every student leaving the School must have 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 dual degree or students who enjoy special conditions for linguistic reasons must obtain the DELF (French language studies diploma) level B2.

► Options

- Aeronautics
- Bio-engineering and nanotechnology
- Civil engineering and environment
- Energy
- It and communication
- Mathematics and decision-making
- Transport and traffic

► Professions

- Innovation research and development engineer
- Industrial process management engineer
- Supply chain engineer
- Business development engineer
- Eco-design and innovation engineer
- Consultant engineer
- Management of industrial and environmental risks engineer

★ The professional taught module (UE pro)

The UE PRO allows students to discover the engineering profession through **through lectures visits to plants, 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.

Similarly, the acquisition of certain skills requires students to learn by doing. Students work **in groups on projects** throughout the core program.

Physical education and sports, one of the aims of which is to «act together» to learn more about ones «potential», is a compulsory part of the integrated UE PRO course.

★ Taught modules in engineering science, economics and humanities

Electrical energy and systems control
 Fluid and energy
 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
 In-depth TM



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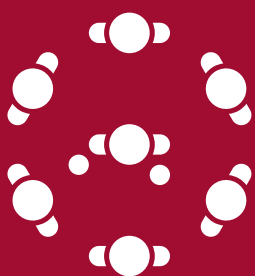


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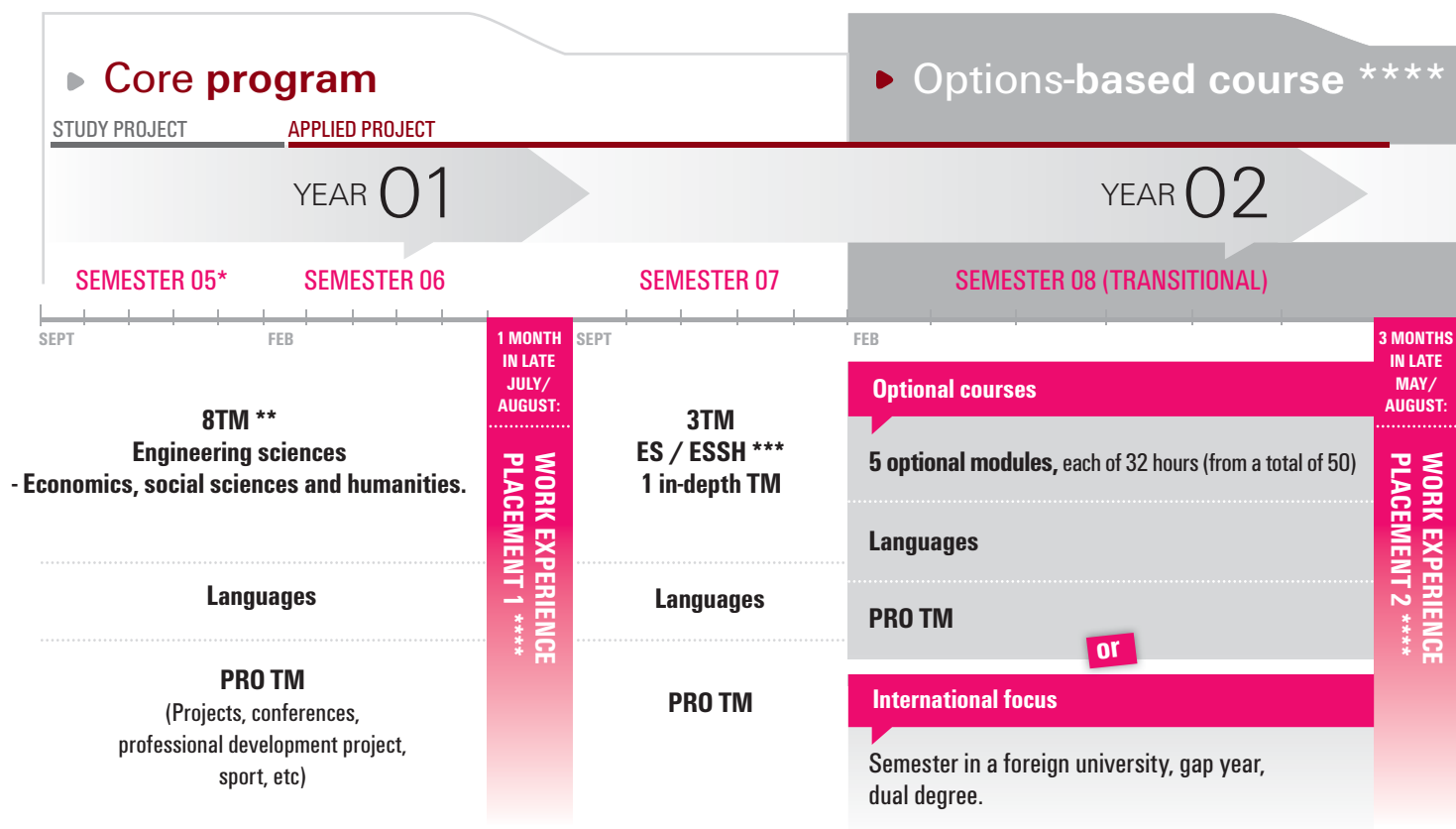
- Benefit from an options-based course to suit all your projects.
- Discover research through constant contact with the CNRS laboratories on the campus.
- Work with internationally renowned companies.
- Acquire a good command of a foreign language and study in prestigious universities abroad.
- Get involved in an exciting range of extra-curricular activities.
- Benefit from partnerships and dual degrees set up by the School: EMLYON, Architecture, etc..
- Play a sport as part of a winning team.
- Enjoy living in a resolutely European city between the mountains and the sea.



GENERAL ENGINEERS' SCHOOL
AT THE FOREFRONT OF
INNOVATION



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In addition to the 12 taught modules in engineering sciences, economics and humanities of the core program there are:

★ **One modern languages taught module**

★ **One professional taught module**

This very broad base allows students to acquire the open-mindedness, knowledge and skills that are characteristic of engineers from École Centrale de Lyon. It is also possible to study for a dual engineer / architect degree.

The learning objectives for each TM come are expressed in terms of:

- ✓ **Acquisition of academic knowledge**
- ✓ **Acquisition of knowledge about the context**
- ✓ **Acquisition of engineering skills (complex problems, multidisciplinary issues, etc.)**

25 % of teaching in these TMs is «self-study»: compulsory and tested group or individual work, where the student's initiative is a key factor.

Interdisciplinary, open-mindedness, consistency, novelty and English are the keywords for this semester

* The semesters are named according to the LMD system to facilitate international communication. Semester S5 corresponds to the 1st semester after the baccalaureate and the core program is therefore run during semesters S5, S6 and S7.

** TM: taught module

*** ES / ESSH: Engineering sciences - Economics, social sciences and humanities.

**** These course options can be undertaken in France or abroad.



AN OPTIONS-BASED TRAINING PROGRAM THAT ENCOURAGES INDIVIDUAL DEVELOPMENT

YEAR 03

SEMESTER 09

SEMESTER 10

SEPT

APRIL

3 TO 6 MONTHS
IN LATE MAY /
SEPTEMBER

WORK EXPERIENCE
PLACEMENT 3 ****

Professional and sectoral practice at École Centrale de Lyon

The student chooses between 7 options (sectors) and 6 professions before doing his end-of-course placement, a 3 to 6 month mission in a company or in a laboratory. He can do his third year in another school belonging to the Écoles Centrales Group to take up an option or profession in other themes.

A career development contract

Since the start of the academic year 2013, this new way of obtaining an engineering degree from École Centrale de Lyon is open to engineering students at the end of their second year. International orientation

International orientation

The semester-based structure of the course facilitates exchanges with the school's historic partners (130 exchanges in over 40 countries). Each year, around 60 students also choose to take part in an academic exchange. This is mainly organized through the TIME network, and involves two years of study at École Centrale de Lyon, followed by two years at the partner university.

Mobility in France

The student may also do his 3rd year in another French institution (these courses do not award a dual degree).

Priority to research

In the third year, engineering students have the option to gain in-depth research skills by following one of the school's fifteen or so research Master's courses in addition to their existing course. Engineering graduates also have the option of undertaking a three-year program leading to a PhD, in one of the school's laboratories.

A dual engineer / manager degree

In 4 years, in partnership with EMLYON Business School.

At École Centrale de Lyon, students follow a core program for three semesters, followed by three semesters of optional subjects.

To gain their degree, students must:

- ✓ Spend at least four semesters under the school's supervision,
- ✓ Demonstrate proven work experience of at least six months,
- ✓ Demonstrate proven mobility for a minimum of 3 months abroad.

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 that an engineer will need.

The following 3, referred to as «optional courses», are designed to help the engineering students to pursue their studies in 4 areas:

- ✓ Professional and sectoral practice
- ✓ International focus
- ✓ Dual training
- ✓ Research

As well as this training, students gain first-hand, in-depth workplace experience by attending conferences, 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.

Throughout their course, they can adjust the pace of their studies, go further into some areas, and take a gap year to gradually build up their project. Their choice provides a measure of commitment, making them accountable and helping them to take full advantage of their training.

