



### The French system of higher education : Grandes Ecoles

The engineering educational system in France is quite different from that in English-speaking countries. Engineering studies in Continental Europe produce two different profiles of engineering degrees: one with a short curriculum (three to four years long) based on an applied approach, and one with a long curriculum (five to six years long, leading to a *Diplôme d'Ingénieur*) based on a theoretical and conceptual approach. In contrast with Bachelor/Master in which the shorter curriculum is commonly part of the longer one, the two curricula are different from the outset.

In France, the best students of any year are drawn into engineering studies, so the potential student body differs from that of engineering departments in most other countries. Most engineering schools in France, called *Grandes Ecoles d'Ingénieurs*, are independent of universities and train top industrial and administrative managers.

### Classes Préparatoires

The *Classes Préparatoires* correspond to two years of post high-school education with heavy emphasis on mathematics and physics. The first year of the *Classes Préparatoires* is termed *Mathématiques Supérieures* and corresponds to the freshman year at US universities. The second year is called *Mathématiques Spéciales* and corresponds to the sophomore year. At the end of the second year, students take the nation-wide competitive entrance examinations for the *Grandes Ecoles*, including *Ecole Centrale de Lyon*. Students generally take the examination to more than one group of schools, and if they do not gain admission to the *Grande Ecole* of their choice, they are usually allowed to repeat *Mathématiques Spéciales* and sit the examinations again. Thus, all students who enter *Ecole Centrale* have at least two years of advanced-level post-high school education.

### The process of admission to *Grandes Ecoles*

Admission to the engineering schools in France is a very selective process: of the 800,000 young people of any year, approximately 400,000 take the *Baccalauréat S* (previously called the *Baccalauréat C*) in fundamental sciences, and of these 100,000 pass. Students who are awarded the *Baccalauréat S* with honors can go on to the *Classes Préparatoires*. After two years of university level study, 13,000 take the entrance examination to *Ecole Centrale de Lyon*. *Ecole Centrale* admits 320 students a year from among the top 700 science students in France. Fifty additional students are taken from scientific universities in several European countries on an accredited transfer exchange scheme.

### Education at Ecole Centrale de Lyon (ECL)

*Ecole Centrale de Lyon* is one of the **top ten French engineering schools**. The students follow a three-year curriculum. The first two years consist of broad-based engineering courses and the third year is devoted to a particular area (Computer Science, Mechanical Engineering,...). ECL is an *Ecole d'Ingénieurs généraliste*, i.e. multi-disciplinary, whose purpose is to train future top executives for French and international companies. The *Diplôme d'Ingénieur* is granted after three years of study. This degree, awarded after **five years of post-secondary study**, is comparable to an **American Master of Science degree**.