



## DIPLOMA SUPPLEMENT n°2013

This diploma supplement model was developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient and independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates, etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should be given.

## 1 INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

- 1.1 Surname:
- 1.2 First name(s):
- 1.3 Date of birth :
- 1.4 Student identification number :

## 2 INFORMATION IDENTIFYING THE QUALIFICATION

#### 2.1 Name of qualification

« Diplôme d'Ingénieur » of the National Graduate School of Chemistry of Lille (École Nationale Supérieure de Chimie de Lille -ENSCL), conferring the level of Master. Degree recognized by the "Commission des Titres d'Ingénieur (CTI)" created in 1934, published in the Official Journal of the French Republic dated from April 5<sup>th</sup> 2011 (Instruction dated from February 24<sup>th</sup> 2011).

## 2.2 Main fields of study for the qualification

General high level engineer in the field of chemistry and its interfaces, prepared to all types of workstations in industry, scientific research and higher education, at national and international levels.

Optional choice of a deepening field during the S9 semester among 3 sectors of application at ENSCL with a possibility to carry out this choice in one of the 19 other graduate engineering schools of the Gay-Lussac Federation, or abroad in a higher education establishment (ENSCL has about forty partners) or in establishments of specialization (double diploma with the École Nationale des Pétroles et Moteurs –

ENSPM - the Escola Politécnica da Universidade de São Paulo, - EPUSP in Brazil, or the University of Regensburg in Germany, for example).

## 2.3 Name and status of awarding institution (in original language)

École Nationale Supérieure de Chimie de Lille – ENSCL (Chimie) CS 90108 – BT C7 Cité Scientifique – 59652 Villeneuve d'Ascq cedex (France).

Public engineering Graduate School placed under the supervision of the ministry in charge of higher education - attached to the University of Sciences and Technology of Lille (USTL – Lille I).

Member of the Gay-Lussac Federation (FGL), which is composed of 19 graduate schools training engineers in Chemistry and Chemical engineering in France.

#### 2.4 Name and status of institution administering the studies : idem

#### 2.5 Language of instruction/examination

French, with exceptions (see Section 6.1).

## 3 INFORMATION ON THE LEVEL OF THE QUALIFICATION

#### 3.1 Level of qualification

Five years of higher education (10 semesters) after the end of higher secondary school (see section 8).

#### 3.2 Official length of programme

The total length of studies for obtaining of the diploma is 10 semesters, which is at least 300 ECTS credits:

- 4 semesters (from S1 to S4) of scientific preparatory classes – CPGE or CPI and Chem.I.St - or equivalent (see section 3.3), which is equal to at least 120 ECTS credits.

- 6 semesters (from S5 to S10) of engineering education at ENSCL, this is equal to at least 180 ECTS credits.

#### 3.3 Access requirement(s)

Each year ENSCL recruits about 60 students for the international integrated preparatory classes of the Gay-Lussac Federation (CPI and Chem.I.St) and about 80 students for engineering cycle.

• Access to the 1<sup>st</sup> year of the preparatory cycle (S1) :

- to CPI : qualifications and academic performance review and interview, for

holders of a science baccalaureate prepared in a French higher secondary school,

- to Chem.I.St : qualifications and academic performance review, for students with a degree from their country giving access to higher education or equivalent

• Access to the 1<sup>st</sup> year of the engineering cycle (S5) is based on:

- continuous assessment, for students from CPI and Chem.I.St cycles of the FGL (20%) or from Advanced Technician Adaptation classes (ATS) to Chemistry and Chemical Engineering.

- national competitive examination for students having completed 4 semesters in classes preparing to Grandes Ecoles (CGPE) (60%).

The remaining 20% are recruited in the following ways:

- adapted national competition, for candidates with a university academic level (2<sup>nd</sup> year of bachelor's degree).

- certificate and qualifications and academic performance review for candidates holding a bachelor degree in chemistry, a University of Technology Diploma (DUT), an Advanced Technician's Certificate in Chemistry (BTS), and for foreign candidates who hold an equivalent degree (Bachelor for example).

- qualifications and academic performance review, in the frame of international exchanges for a double diploma (a stay of at least 4 semesters at ENSCL is required).

• Access to the 2<sup>nd</sup> year of the engineering cycle (S7) is based on:

- certificate and qualifications and academic performance review, for candidates with M1 academic level (1<sup>st</sup> year of a Master degree) and for foreign candidates who hold a degree with equivalent level. The study programme then consists of 4 semesters leading to the "Diplôme d'Ingénieur".

The scientific preparatory classes consist of fundamental higher education strongly based on theoretical scientific courses (mathematics, physics, chemistry, data processing) together with courses of French and foreign languages. Only 20% of the holders of the scientific "baccalaureat" (secondary school diploma) are admitted into these preparatory classes. Work in the preparatory classes is very intensive: more than 60 hours a week of courses and personal work.

## 4 INFORMATION ON THE CONTENTS AND THE RESULTS GAINED

## 4.1 Mode of study

• Full time.

• Average hours: 26 tutorial hours by week, 16 weeks by semester during 5 semesters (S5 to S9, the S10 is dedicated to the internship programme required for graduation, which is equal to 416 hours by semester (at least 30 ECTS credits).

## 4.2 **Programme requirements**

#### 4.2.1 Organisation of the engineer programme

The study programme has 5 semesters (S5 to S9 - 150 credits) of lectures, exercises of application sessions, practicals and projects. In addition to these academic periods, students must carry out several work placements :

- an execution placement in a company (placement 1) of at least 6 weeks between S2 and S3 semester (5 credits),

- an industrial training placement (placement 2) of at least 8 weeks between S4 and S5 semester (10 credits),

- a final-year project of at least 6 months in an industrial unit or a research lab during S10 semester (30 credits).

## 4.2.2 Acquired competence

The holder of the ENSCL Chemistry Engineer Diploma :

• has a solid theoretical knowledge in the field of chemistry and its interfaces, with experimental expertise,

 has methodological tools and managerial skills required to the exercise of his responsibilities in a company about technical and scientific fields and also in economic and social areas,

• has a global vision of his profession from the product design to its industrial and commercial development, taking into account environment and requirements of quality and security,

• develops work and communication skills in a international context and/or evolution.

In addition to that, depending on the areas of study chosen, it integrates the following specific skills:

- Chemistry and Sustainable Process for industry:
- To expose the challenges founded by chemist engineers and achieve a sustainable industry.
- To adapt the processes by putting in place the industrial and laboratory reactors, integrated on clean processes, respecting the environmental rules in the area of chemical industry and industrial waste processing.
  - Formulation Chemistry:
- To be able to use principal experimental and conceptual instruments, necessary for conceptualizing, characterising and preparing complex combinations founded in specialized industries (cosmetic, paint, detergent, oil...).
  - Optimisation and reliability of materials.

To be able to use instruments for modifying the surface of a material for a specific function.

## 4.3 **Programme details**

The study programme is organized in fields: fundamental chemical sciences, experimental practices, industrial chemical sciences and technology, entrepreneurial education, international education and professional education.

The first three semesters (S5 to S7) and one part of the 4<sup>th</sup> semester (S8) constitute a common core in which every basic discipline of chemistry and chemical engineering is presented.

The student personalizes the contents of his training from S8 semester, where he can choose between "Molecules" or "Material. During S9 semester, he has the choice, if he stays at ENSCL, between three options: "Sustainable Chemistry and Processes", "Formulation Engineering" and "Optimization and Reliability of Engineering Materials". And he can also choose, after authorization, a stay either in a French higher education establishment (especially among the Gay-Lussac Schools) or abroad in one of ENSCL university partners which have full academic recognition (possibility of a double diploma in some cases) or else to follow concurrently his 3<sup>rd</sup> year, a Research Master (ENSCL is entitled for 6 of them, in partnership with Lille1 University-Science and Technology: Chemistry and Engineering Formulation ; Chemistry, Environment, Energy; Engineering of Polymer Materials; Organic and Macromolecular Chemistry ; Advanced Materials ; Catalysis and Processes).

The compulsory practice of two foreign languages (English and German or Spanish) is required. Japanese is optional.

The entrepreneurial education allows students to acquire skills in economic, juridical, management and communication fields.

The list of courses followed and the results obtained by the student during his/her studies are provided on the mark transcripts annexed to this Diploma Supplement.

From S5 semester to S9 semester, the students are guided in the preparation of their professional projects. They are built and refined in order to help the students in their choices at the end of their studies and for heir placements.

## 4.4 Grading scheme and, if it is possible, grade distribution information :

• Each training year is structured in <u>teaching fields</u> ("Domaines d'Enseignement, D.E"), which are composed of modules. A module can be composed of one or several courses, a <u>course</u> representing the basic unit of the education.

• Each course or module is assigned its own grade-weighting factor ("coefficient") published at the start of each academic year in the education regulation.

- 10 to 12 courses by semester.
- Each course is marked from 0 to 20.

• The mark results from individual or group assessment (written and/or oral) of lectures, practical, projects.

• The exhaustive list of courses followed by the student "NOM" "PRENOM" and their cluster by units in order to obtain the sum of average marks presented in the attached copy of grades.

• Placements imply a written report and in some case an oral presentation (except in the 2<sup>nd</sup> year-placement) in front of a jury. The appreciation of the industrial tutor is included in the marking as well as the editorial, scientific and technical quality of the report and of the oral presentation.

A jury meets at the end of each academic year to study marks and to decide on validation. This validation is obtained if every condition mentioned hereafter is completed:

- an annual average mark (calculated by using the grade-weighting factor provided for each module) above or equal to 10/20 for the theoretical fields in chemistry,
- each module) above of equal to 10/20 for the theoretical fields in chemistry,
- an average mark above or equal to 07/20 for each theoretical teaching module,
- a general annual average mark above or equal to 12/20.

If one of these conditions is not completed the student is called for a resit organised after S6 and S8 semesters. The jury meeting after the resit decides to validate corresponding semesters or to award the diploma, then, students are nit ranked.

## 4.5 Overall classification of the qualification

"NOM" "PRENOM" is ranked "PLACE" among the "EFFECTIF" students of "ANNEE" academic year.

## 5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

#### 5.1 Access to further studies

- Specialised short course studies:
  - Diplomas with the label of the 'Conference des Grandes Ecoles': specialization in vocational guidance (specialist masters).
  - 'Diplômes d'Ingénieur de spécialité'
  - Master of Business and Administration (MBA) in France or abroad.
  - Education to professions of research and teaching : Doctorate, PhD, "Agrégation" ...

## 5.2 Professional status

In France, the 'diplôme d'ingénieur' is subject to a periodical national accreditation by the 'Commission des Titres d'Ingénieur' (CTI). In accordance with this accreditation, the graduate engineers of ENSCL can act as engineers immediately after receiving their diploma. The 'diplôme d'ingénieur' confers the Master's degree.

## **6** ADDITIONAL INFORMATION

## 6.1 Additional information

The education of "NOM" PRENOM" went off in the following way (preparatory and engineer programmes) :

Semester	Year	Institution or Company	City	Country	Language of instruction
S1 – S4					
S5 – S6					
Placement					
S7 – S8					
Placement 2					
S9					
S10 – FYP*					

\* Placement- final year project

<u>Comment</u> : (Please indicate if you wish complete a double degree)

Degree obtained : Ingénieur de l'École Nationale Supérieure de Chimie de Lille conferring the Master's degree

## 6.2 Other sources of information

http://www.ensc-lille.fr

## 7 CERTIFICATION OF THE SUPPLEMENT

- 7.1 Date :
- 7.2 Signature : Bernard FONTAINE

## 7.3 Function : Director of ENSCL

7.4 Official stamp or seal :

# 8 INFORMATION ABOUT THE HIGHER EDUCATION SYSTEM IN FRANCE

