

CA de l'École polytechnique du 9 novembre 2017

Pièce n°13

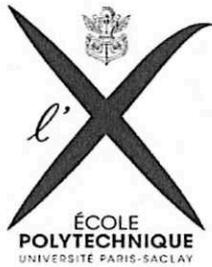
**Règlement des études du cycle Bachelor**

Le règlement des études du cycle Bachelor est joint à cette présente fiche.

**Délibération :**

**Le Conseil d'administration approuve le règlement des études du cycle Bachelor**





# **École Polytechnique**

## **Bachelor Program Handbook**

### **Reference texts**

Education Code – Articles L.675-1 and L.755-1;

Decree N° 2015-1176 dated 24 September 2015 relating to the organization and the administrative and financial status of École Polytechnique;

The resolution of the École Polytechnique Board of Directors dated 22 October 2015 delegating the authority to establish the fees for services provided by École Polytechnique to the Chairman;

The recommendation of the École Polytechnique Board of Directors dated 23 June 2016 relating to the creation of the Bachelor and Graduate Degree diplomas;

Decision N° 2016-162 EP/SG dated 13 July setting the Bachelor's programs tuition fees;

## **General Terms**

This program handbook defines the general principles governing the selection of applicants and their admission to École Polytechnique's Bachelor Program. Furthermore, it outlines the structure and conditions of the program's three years of study.

This document applies to students enrolled in the program as of the 2017-2018 academic year. Terms outlined in this handbook may be revised annually as needed.

Two additional documents supplement this handbook, setting out the framework for students' training:

- École Polytechnique Rules and Procedures;
- Code of Student Conduct

In the event of any inconsistency between these documents, the École Polytechnique Rules and Procedures shall prevail.

### **1 - École Polytechnique's Bachelor Program**

École Polytechnique's Bachelor Program is a multidisciplinary degree taught primarily in English and primarily based on the natural sciences, mathematics foremost, coupled with exposure to the social sciences and humanities. Consistent with the diverse backgrounds of its students, the program trains them to take charge of their adult lives through personal development. As such, the Bachelor Program strives to allow each student to develop their multi-faceted personality through its unique academic program. Therefore, École Polytechnique seeks to serve the greater good by preparing internationally-oriented students who hold dear the values of excellence, audacity, and integrity, to use these skills and values to improve our world.

The program's coursework is outlined in the syllabi appended to this document, which may be revised annually as required. For each course, students will receive a course outline which lists the course objectives, the skills they are expected to acquire upon course completion, and the ways in which their performance will be assessed.

The Bachelor Program's first year is a foundational year in which students will develop the skills required to successfully complete their academic training. This initial year of study also allows students to discover various scientific fields to support them in selecting a major. In the program's second and third years, students must select between the following majors:

- Mathematics and Physics
- Mathematics and Computer Science
- Mathematics and Economics

Throughout their program, students participate in activities and courses, particularly through sports, to foster their personal development.

Depending on their academic performance, students are eligible to complete their fifth semester abroad (first semester of Year 3). Students must also complete a Bachelor thesis which is an 8-week lab-based research project in their sixth semester (second semester of Year 3). During their study breaks and holidays, students may pursue professional internships on a voluntary basis in accordance with relevant École Polytechnique policies.

### **2 - Program Structure**

The Bachelor Program consists of six (6) semesters over the course of which 180 ECTS credits will be obtained. These six (6) semesters are divided over three (3) years; thus, two (2) semesters per academic year. Each semester allows students to obtain at least 30 and no more than 36 credits. Students can opt to take electives or to complete projects complementary to their area of study, both of which reinforce the key skills acquired through their academic training, and for which they may receive ECTS credits.

Students who are exceptionally strong academically are eligible to take a supplementary course(s) which would cause them to surpass the semestrial 36-credit limit. Supplementary courses are optional and are awarded ECTS credits; however, the ECTS credits obtained through the completion of such courses do not count towards the credits required for graduation or progression from one year to another. The Bachelor Program Office adjudicates supplementary course requests for students entering their first year, while in subsequent years, the Academic Council does so. Students who commit to taking supplementary courses must complete the entire course and a final grade will appear on their transcript; in extraordinary cases, students may file a request with the Bachelor Program Office explaining the reasons why the final grade should be omitted from their transcript.

The degree is only awarded if a student attains 180 ECTS credits over the course of six (6) semesters.

Each of the program's subject pillars (mathematics, physics, computer science and economics) is represented by an academic adviser, selected by these respective departments.

## **Section 1 – Recruitment and Selection of Applicants**

### Article 1 – Application Procedure

Applications are open to the following:

- those preparing for a diploma awarded for the completion of secondary education (French baccalaureate, baccalaureate with international option, International Baccalaureate, Swiss Gymnasium Matura, European certificate attesting the completion of secondary education, etc.),
- those preparing for an entrance certificate to enter higher education, scientific universities in particular,
- those who have already obtained a diploma or entrance certification enabling them to enter higher education.

Applications are to be made online and supporting documents to be submitted include transcripts, a personal statement, a CV and the contact details of two referees. Following a review of their application, preselected applicants are invited to take part in a video conference interview. Applicants selected following the interview are admitted to the École Polytechnique Bachelor Program, provided they obtain a diploma awarded for the completion of secondary studies or an entrance certificate to enter higher education.

An application fee is due when the application is submitted. A decision of the President of École Polytechnique, Chairman of the Board of Directors, sets the fee.

### Article 2 – Selection Committee

Applications are reviewed by a Preselection Committee and an Admissions Committee, both of which are chaired by the Provost or the Vice Provost.

The membership of the Preselection Committee is the same as that of the Admissions Committee. The mandatory members are:

- the Provost or the Vice Provost
- the Dean of the Bachelor Program or their representative
- the Director of Military Training and Personal Development, or their representative
- a representative from the Department of Pure Mathematics and from the Department of Applied Mathematics,

- a representative from the Department of Physics and the Department of Mechanics,
- a representative from the Department of Economics,
- a representative from the Department of Computer Science.

Non-mandatory members acting in an advisory capacity are:

- a representative from the Department of Marketing and International Relations,
- a representative from the École Polytechnique Alumni Association
- a representative from the École Polytechnique Foundation,
- the Bachelor program admissions officer.

Selection criteria are primarily criteria of excellence as regards the academic results already achieved in previous education. However, they also take into account personal motivation, applicants' academic projects, their proficiency in English, as well as their commitment to studying and living in an international and multicultural environment.

Once the Admissions Committee has reviewed applications, the Bachelor Program Office notifies applicants of their admissibility. An official certificate of admission is sent to all admitted candidates. However, students are advised that registration for the Bachelor Program is conditional on their obtaining a diploma awarded for the completion of secondary education or any other diploma or certificate mentioned in this handbook (*see Article 1 – Application Procedure*).

## **Section 2 – Registration Procedure**

Registration is mandatory and enables students to attend courses and take exams. It consists in annual administrative registration and academic registration each semester.

### Article 3 – Annual Administrative Registration

Students complete their annual administrative registration online. In Year 1, administrative registration is conditional on the payment of a tuition fee deposit, in accordance with the fee schedule set by the École Polytechnique Board of Directors.

A student's administrative registration is confirmed once the balance of tuition fees has been paid. If a student receives financial support from École Polytechnique or the École Polytechnique Foundation, registration is confirmed upon payment of the balance of tuition fees, the said financial support having been deducted.

Students must be covered by a public health insurance plan ("sécurité sociale étudiante") when they register at the start of each academic year. Students from countries outside the European Union must adhere to the French public health insurance plan, while students from countries within the European Union have the option to keep their home country's health insurance. Students are required to produce a civil liability insurance certificate, covering them against any damage caused during the program. Although not compulsory, purchasing a private top-up health insurance policy is highly recommended.

Once the administrative registration is complete, each student will be provided with a badge, which doubles up as a student card, at the start of the academic year. Badges must be returned to École Polytechnique at the end of the program.

### Article 4 – Academic Registration

Academic registration each semester is mandatory. Academic registration serves as registration for exams for the relevant semester. Students must communicate their chosen courses to the Bachelor

Program Office in the manner and timeframe indicated to them. If they fail to do so, their courses will be allocated to them automatically by the Bachelor Program Office.

Registering for electives requires the prior approval of the Bachelor program's academic advising team.

In Year 1, students choose their double major for Years 2 and 3 from among those offered by the Bachelor program. The chosen major is approved by the Bachelor Program Academic Council, as defined in section 4, depending on the student's academic level, in the manner and timeframe indicated beforehand. Any request to change majors from Year 2 must be duly justified and submitted to the Academic Council for its consideration.

## **Section 3 – Knowledge Assessment**

### Article 5 – Grading

#### 1. Grading: Numeric and Letter Grades

For each course, students will receive a numeric grade (from 0 to 20) and a letter grade (from A+ to F). The conversion from numeric grade to letter grade is determined by the instructor leading the course. At the beginning of the course, the instructor must outline the manner in which students will be evaluated and must enumerate the course's academic objectives each student must acquire upon course completion.

Letter grades are as follows: A+, A, A-, B+, B, B-, C, D, E, F. These grades indicate the level to which the student has achieved a given course's academic objectives. Letter grades mean the following:

A+, A, A- : The course's academic objectives were surpassed

B+, B, B- : The course's academic objectives were attained

C: The course's academic objectives were generally attained with some persistent weaknesses

D: The course's academic objectives were minimally attained with persistent weaknesses

E: The course's academic objectives were not attained

F: The course's academic objectives were not attained as the student demonstrated no or little effort (e.g. numerous unexcused absences, failed to attend exams) and/or committed/attempted to commit an academic offense (e.g. cheating, plagiarism)

Grades ranging from A+ to D are passing grades which allow students to receive ECTS credits. Grades of E and F allow students to take remedial courses.

#### 2. Language Requirements

Learning French is obligatory for non-Francophone students. Unless otherwise deemed by the Department of Languages and Cultures, students are considered non-Francophone if they have not completed at least three years of their high school education in French. A "B2" French level on the Common European Framework of Reference for Languages (CEFR) is required of non-Francophone students to obtain their degree.

Francophone students must learn another foreign language. If their knowledge level permits, they may also take culture and civilization courses in a foreign language.

Regardless of the initial foreign language class taken (including French), a "C1" CEFR level is required for a student to begin learning an additional foreign language that complements or replaces the language initially selected. All changes to foreign language classes must be approved by the Department of Languages and Cultures.

### 3. Specific Terms Relating to Personal Development and Sports

Unless exempt by the Director of Military Training and Personal Development, playing sports is required as it is a main element of the program's personal development component which allows students to develop all facets of their personalities.

École Polytechnique believes it is necessary for students to become involved in the collective and individual duty of applying the terms of this program handbook and of the student handbook. Collective living and the academic life are governed by the same guiding principle: responsibility shared between staff and students. The objective is for everyone to achieve a sense of responsibility and autonomy. The elective assessment of the Personal Development course, contributing to enhancing commitment to the concept of personal development, is intended in that spirit.

#### Article 6 – Coursework and Exams

Knowledge acquisition is assessed in either of the following two ways, as determined by the instructor of each course:

- Coursework throughout the semester (e.g. take-home/in-class assignments, group work, quizzes, etc.)
- Coursework as described in the bullet above AND a final exam

Coursework allows for students' progress and knowledge acquisition to be regularly monitored; as such, it must consist of at least 50% of the final grade.

#### Article 7 – Attendance

Attendance of all classes and exams is mandatory. Absence from and tardiness to class may adversely affect coursework results in accordance with the penalties specified in course outlines. More specifically, three unexcused absences in courses with small groups such as tutorials, labs, seminars, as well as sports and language classes will result in a maximum coursework grade of C or 12. Absences and tardiness may be further penalized by the Academic Council.

All absences must be justified. The Bachelor Program Office is charged with validating the authenticity of the documentation provided to justify absences from class and/or exams.

It is the responsibility of each student to make up for missed classes and to inform the professor(s) concerned in advance.

#### Article 8 – Plagiarism and Cheating

Evaluation of knowledge acquired throughout the course seeks to assess students' individual and group work skills. All coursework produced by students must be his/her own personal work, or the work of his/her group for instances involving group work.

Plagiarism means the representation of another's work, published or unpublished, as his or her own in any academic writing (e.g. essay, thesis, research report, project or assignment) submitted in a course, whether the material so represented constitutes a part or the entirety of the work submitted. École Polytechnique reserves the right to employ the means necessary to identify plagiarism and cheating, and to prosecute such offences in accordance with the institution's rules and regulations.

All infractions during exams may lead to a disciplinary procedure brought forth against the student concerned. In the event of a flagrant case of cheating or attempted cheating, the exam invigilator shall take all appropriate measures to stop the cheating, or attempted cheating, while allowing the suspected student(s) to complete their exam. Materials used to support cheating shall be immediately confiscated by the invigilator and shall be submitted to the Bachelor Program Office which will transmit it to the Disciplinary Committee which will use the evidence to establish the facts of the situation. The invigilator shall immediately draft a report, which must be signed by the other invigilators present as

well as by the perpetrator who cheated/attempted to cheat. When the perpetrator refuses to sign, this shall be reflected in the report.

Plagiarism, cheating or attempted cheating automatically results in prosecution before the Disciplinary Committee. In cases in which plagiarism, cheating or attempted cheating is proven, consequences may range from receiving a O or F on the coursework concerned, to expulsion from the Bachelor Program.

#### Article 9 – Make-up Exams

Make-up exams are scheduled for each semester and take place during the timeframe outlined in the academic calendar provided to students. When a student has an excused absence from an exam, and this absence would cause him/her to fail the course, then s/he automatically has the right to a make-up exam.

Unexcused absences from exams may result in a grade of zero or F for the relevant exam(s) and do not provide access to make up exams.

Make-up exams are assessed with a numerical grade (from 0 to 20). This grade, in addition to the results related to other coursework allows the instructor to attribute a letter grade (A+ to F) in accordance with the terms outlined in Article 5 (Grading). Students who fail the make-up exam are, like other students, eligible to participate in remedial courses.

#### Article 10 – Remedial Exams

When a student does not receive ECTS credits for a course given his/her poor academic performance, s/he may take a remedial course. Remedial courses take place during the timeframe outlined in the Academic Calendar. Content of remedial courses is guided by the courses a student failed (i.e. the courses in which they received a grade of E or and F).

When a student passes a remedial course, s/he can only receive a maximum number grade of 10 and a letter grade of D, with the following transcript notation: Remedial course completion. This grade replaces the failing grade initially obtained.

Absence from a remedial course exam, whether excused or unexcused, results in an automatic failure of the exam.

#### Article 11 – Promotion

Degree conferral requires 180 ECTS credits.

Promotion from one year to the following requires 60 ECTS credits. Nevertheless, conditional promotion may be permitted when a student obtains at least 56 ECTS credits. In such instances, the missing ECTS credits shall be obtained either through remedial or additional courses in the following academic year.

Promotion and repeating a year for the Bachelor Program's three years occurs as follows:

- Year 1 :
  - o Upon completion of at least 60 ECTS credits: automatic promotion to Year 2,
  - o Upon completion of between 56 and 59 ECTS credits: possibility of conditional promotion with the obligation to make up the missing ECTS credits during Year 2,
  - o Upon completion of 55 ECTS credits or fewer: repeat Year 1
- Year 2:
  - o Upon completion of at least 120 ECTS credits: automatic promotion to Year 3
  - o Upon completion of between 116 and 119 ECTS credits: possibility of conditional promotion with the obligation to make up the missing ECTS credits during Year 3

- Upon completion of 115 ECTS credits or fewer: repeat Year 2
- Year 3:
  - Upon completion of at least 180 ECTS credits: degree conferred,
  - Upon completion of 179 ECTS credits or fewer: repeat Year 3.

Students who were conditionally promoted to Year 2 (i.e. they completed 56 to 59 ECTS credits), as well as students who have not completed 90 ECTS credits after the end of semester 3, or have not completed 120 ECTS credits at the end of semester 4, are unable to undertake a semester abroad in Semester 5. The Academic Council has the authority to provide an exception to this rule.

#### Article 12 – Appeal Procedures

##### 1. Grade Appeal

In the event of a grade appeal, a written, duly justified and signed request for must be sent to the instructor in charge of the relevant course and copied to the Dean of the Bachelor Program within two weeks of the first business day following the publication of results.

The decision to modify the challenged grade belongs to the instructor in charge of the course.

The instructor may provide for a review of the paper in a manner devised by him/her and communicated to the student concerned.

##### 2. Appeal of a Decision of the Student Progression Committee

In the event of an appeal against the decision of the Student Progression Committee, a written, duly justified and signed request must be sent to the chairman of the Committee within two weeks of the first working day following the publication of the decision.

The right to modify the challenged decision belongs to the chairman of the Committee.

#### Article 13 – Expulsion

A student may be expelled for disciplinary reasons and/or for poor academic performance. A decision to expel a student permanently is taken by the Bachelor Program Disciplinary Committee, which meets on the recommendation of the Bachelor Program Academic Council, once the student concerned has been heard. Tuitions fees paid to École Polytechnique by a student who has been expelled will not be reimbursed.

## **Section 4 – Bachelor Program Academic Council**

#### Article 14 – Organization and Membership

Members of the Bachelor Program Academic Council are:

- the Vice Provost for Education,
- the Dean of the Bachelor Program,
- the Bachelor Program Personal Development Director,
- Bachelor Program academic advisers,
- Bachelor Program first-, second- and third-year officers,
- the Manager of Academic Records
- student representatives.

It is chaired by the Vice Provost for Education or by the Dean of the Bachelor Program in his/her absence.

#### Article 15 – Role of the Bachelor Program Academic Council

The Bachelor Program Academic Council is tasked with checking and validating the grades awarded to students.

Taking into account any particular circumstances which may affect the personal and academic progress of each student, the Academic Council formulates recommendations to the Student Progression Committee. More specifically, it advises on students' double majors, the electives (and supplementary courses) they can pursue, and their choice of university for the semester abroad.

The Academic Council reviews program components and makes recommendations as to areas for improvement. It analyses the course evaluation forms completed by students and acts as an adviser for continuous improvement.

The minutes of the Academic Council are prepared under the supervision of the chairman who signs them.

The Bachelor Program Office undertakes the secretarial duties of the Academic Council.

### **Section 5 – Student Progression Committee**

#### Article 16 – Organization and Membership

The Student Progression Committee's voting members are:

- the Provost,
- the Vice Provost for Education,
- the Dean of the Bachelor Program,
- heads of academic units,
- the Director of Military Training and Personal Development.

It is chaired by the Provost or the Vice Provost for Education in his/her absence.

A preliminary Committee meets prior to the Student Progression Committee. Its membership is extended to the following members, acting in advisory capacity:

- the Bachelor Program Personal Development Director,
- Bachelor Program first-, second- and third-year officers, student representatives

The Manager of Academic Records is also present during the whole duration of the Committee, acting in advisory capacity.

#### Article 17 – Role of the Student Progression Committee

Promotion from Year 1 to Year 2 and from Year 2 to Year 3, as well as graduation approval occurs after deliberation of the Student Progression Committee. The Committee also approves major, elective, and supplementary course choices. It bases its decisions on all the results achieved by students, taking into account the recommendations from the Academic Council.

The decisions of Student Progression Committee are final. The Committee may, after deliberation, modify or compensate each grade and/or decide to award one or more additional ECTS credits to students.

The Student Progression Committee may impose sanctions on the grounds of poor academic performance, which can extend to permanent expulsion of the student concerned.

The minutes of the Student Progression Committee are prepared under the supervision of the chairman who signs them.

The Bachelor Program Office undertakes the secretarial duties of the Student Progression Committee.

## **Section 6 – Bachelor Program Disciplinary Committee**

### Article 18 – Organization and Membership

The voting members of the Disciplinary Committee are:

- the Director General,
- the Director of Military Training and Personal Development,
- representatives from the academic and research departments,
- the Provost or Vice Provost for Education,
- the Dean of the Bachelor program.

It is chaired by the Director General or by the Director of Military Training and Personal Development in his/her absence.

A preliminary committee meets before the Disciplinary Committee. Its membership is extended to the following members, acting in an advisory capacity:

- the Bachelor Program Personal Development Director,
- the Head of Legal Affairs or his/her representative,
- student representatives.

### Article 19 – Role of the Disciplinary Committee

The Disciplinary Committee meets at the request of the Bachelor Program Academic Council to examine any failure to comply with École Polytechnique's Rules and Procedures, or the rules and procedures set out in the Bachelor Program Handbook and/or the Student Code of Conduct, and more generally for any misconduct. The Disciplinary Committee may impose sanctions on disciplinary grounds, which can extend to permanent expulsion of the student concerned.

The minutes of the Disciplinary Committee are prepared under the supervision of the chairman who signs them.

## **Section 7 – Grade Transcript and Degree**

### Article 20 – Transcript and Degree Award Procedures

Diplomas and transcripts are personal documents which may only be given to the persons concerned or their legal representatives.

At the end of each semester, students receive a transcript summarizing the grades and ECTS credits achieved. There is no indication of ranking on the transcript. However, it provides an indication of the student's rank relative to his/her fellow students.

At the end of the program, the student is awarded École Polytechnique Bachelor of Science, provided s/he has met all administrative and academic requirements.

There is no indication of ranking on the diploma. However, distinctions awarded to certain students are inscribed on the diploma, as follows:

- Cum laude,

- Magna cum laude,
- Summa cum laude.

These distinctions are awarded by the Student Progression Committee to recognize those students who have distinguished themselves by their academic excellence, their sustained efforts and their involvement in their class year and in École Polytechnique.