

**REGULATIONS FOR THE CONTROL OF  
STUDIES OF THE SECTION OF  
MATERIALS SCIENCE AND ENGINEERING  
for the 2021-2022 academic year  
May 26, 2021**

*The management of the Swiss Federal Institute of  
Technology Lausanne*

Having regard to the ordinance on education leading to the bachelor's and master's degrees of the EPFL of June 14, 2004,  
Having regard to the ordinance on the control of studies leading to the bachelor's and master's degrees at EPFL of June 30, 2015,  
having regard to the syllabus of the Materials Science and Engineering Section

*stop:*

**Art. 1 - Scope of application**

The present regulation sets the rules for the control of the bachelor and master studies of the section of science and engineering of materials that refer to the academic year 2021-2022.

**Art. 2 - Training stages**

1. The bachelor's degree is composed of two successive stages of training:
  - the one-year propaedeutic cycle, the successful completion of which results in 60 ECTS credits acquired at once, a condition for entry into the bachelor's cycle.
  - the two-year Bachelor's program, which requires 120 credits to enter the Master's program.
2. The master's degree is composed of two successive stages of training:
  - the Master's program, which lasts 3 semesters and requires the acquisition of 90 credits, including 30 credits of a minor or a specialization, which is a prerequisite for the Master's project
  - The Master's project, which lasts 17 weeks and is worth 30 credits. It is placed under the responsibility of a professor or a MER affiliated to the Materials Science and Engineering Section. Before the beginning of the project and upon proposal of the master in charge, the section may extend the duration of the master project up to 25 weeks for projects carried out outside EPFL.

**Art. 3 - Examination sessions**

- 1 Sessional courses are examined during the winter or summer sessions. They are mentioned in the study plan with the mention H or E.

- 2 Semester courses are taken in the fall or spring semester. They are indicated in the syllabus as sem A or sem P.

- 3 An annual branch, i.e., one that is titled on a single line in the study plan, is examined as a whole during the summer session (E).

- 4 For the sessional branches, the written or oral form of the examination indicated for the session may be supplemented by written or oral tests of knowledge during the semester, as indicated by the instructor.

**Chapter 1: Preparatory Cycle**

**Art. 4 - Preliminary examination**

- 1 The propaedeutic examination includes "Polytechnic" subjects with 44 coefficients and "Specific" subjects with 16 coefficients, distributed equally over two blocks.
- 2 The first block of branches corresponds to 36 coefficients and the second block of branches corresponds to 18 coefficients.
- 3 The propaedeutic examination is passed when:
  - the student has obtained, at the end of the winter semester, a grade point average equal to or greater than 3.50 in the first block, which is a requirement for entry into the spring semester, and
  - they have obtained, at the end of the summer session, an average of 4.00 or more in each of the two blocks, which is a condition for entry into the bachelor's program.
- 4 A student who fails the propaedeutic examination will not be allowed to repeat the following year the semester branches for which he/she has obtained a mark equal to or higher than 4,00.

**Chapter 2: Bachelor's Degree**

**Art. 5 - Organization**

The courses of the bachelor cycle are divided into 4 blocks: "Basic Sciences", "Fundamentals of Materials Science", "Deepening Materials" and "SHS".

**Art. 6 - 2<sup>ème</sup> year examination**

- 1 Block 1 "Basic Sciences" is passed when the 37 credits of the **37 credits** of the study plan are obtained.

2 Block 2 "Fundamentals of Materials Science" is passed when the **19 credits** of the study plan are obtained.

#### **Art. 7 - 3<sup>ème</sup> year examination**

Block 3 "Advanced Materials" is passed when the **56 credits** of the study plan are obtained.

#### **Art. 8 - 2nd and 3rd year examination**

Block 4 "SHS and Cross-Curricular MGT" is passed when the **8 credits** of the study plan are obtained.

### **Chapter 3: Master**

#### **Art. 9 - Organization**

The master's degree courses are divided into :

- 1 block "Fundamental branches in materials" giving rise to 16 credits,
- 1 "Options" group for a total of 48 credits.
- 1 block "Projects and SHS" leading to 26 credits.

#### **Art. 10 - Options**

1 In addition to the elective courses offered in the syllabus, other courses may be chosen from the list of recommended courses offered by other sections or proposed by the student. In the latter case, the student must justify his or her choice of options outside the section and have it endorsed by the director of the Materials Science and Engineering section. In the case of the choice of the specialization "Materials research and development", the number of credits outside the MX plan can reach a maximum of credits 12 and in the case of the choice of a minor, a maximum of 6 credits outside the plan can be obtained.

#### **Art. 11- Specialization and minors**

1 In order to deepen a particular aspect of his training or to develop interfaces with other sections of EPFL, the student must follow the training offered within the framework of the "Materials research and development" specialization of the Materials Science and Engineering section or a minor included in the EPFL offer.

2 The selection of courses that comprise a minor is made with the Materials Science and Engineering section and the minor chair. The "Materials Science and Engineering" minor may not be selected.

3 The student announces the choice of the specialization "Materials research and development" or of a minor to his section at the latest at the end of the first semester of the master studies.

7 A minor or the "Materials research and development" specialization is passed when a minimum of 30 credits are obtained from the endorsed branches.

8 If the minor is dropped during the course of study, the Materials Science and Engineering section determines the number of validated credits to be transferred to the option group.

#### **Art. 12 - SHS Education**

The two SHS branches are each worth 3 credits. The fall semester course introduces the spring semester project. The College of Humanities and Social Sciences may depart from this organization if it considers that the reason is justified. It may also authorize a student to carry out his or her project in a semester that does not immediately follow the semester in which the introductory teaching takes place.

#### **Art. 13 - Examination of the master cycle**

1 The "Projects and SHS" block is passed when the **26 credits** of the study plan are obtained.

2 The "Fundamental branches in materials" block is passed when the **16 credits** out of the 20 proposed in the study plan are obtained.

3 The "Options" group is passed when **48 credits** (18 credits if the student is taking a 30-credit minor) are obtained, by individual success in the branches included in this group.

4 A student wishing to complete a minor must complete 30 credits in a minor.

### **Chapter 4: Internship and master project**

#### **Art. 14 - Engineering internship**

1 Students must complete an engineering internship of at least 8 weeks and no more than 6 months. However, the completion of a 25-week master's project in a company exempts students from this obligation.

2 As a general rule, the internship must be completed after two semesters of the Master's program but before the Master's project. At the student's request, the section may authorize the student to do the internship at the end of the bachelor's cycle. The internship will take place between the end of the bachelor cycle and the beginning of the master project.

3 The section's internship supervisor evaluates the internship with a "pass" or "fail" rating. Successful completion is a condition for admission to the Master project. If the internship is not successful, it can be repeated once, usually in another company.

4 It is validated with the 30 credits of the master project.

5 The organization of the internship and the criteria for its validation are the subject of an internal directive of the section.

## **Chapter 5 - Mobility**

### **Art. 15 - Authorized periods of mobility**

Students of the Materials Science and Engineering section can carry out a mobility stay in the 3rd year of their Bachelor's degree and/or as part of the Master's project.

### **Art. 16 - Conditions**

1 For a mobility in the 3rd year of the Bachelor program, the student must have passed the propaedeutic exam with a minimum average of 4.5 0and not be behind in the acquisition of the 60 credits of the 2<sup>nd</sup> year of the Bachelor program.

2 For a mobility to the master project, the student can be conditionally admitted if he/she has no more than 8 missing credits in the master cycle.

3 Specific conditions exist depending on the destination, the agreement of the mobility delegate is necessary to go on a mobility stay.

On behalf of the EPFL management

The President, M. Vetterli  
Academic Vice President, J. S. Hesthaven

Lausanne, May 26, 2021