REGULATIONS FOR THE CONTROL OF THE
STUDIES OF THE SECTION
OF ELECTRICAL AND ELECTRONIC
ENGINEERING
for the academic year 2021-2022
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 study plan of the section of electrical and
electronic engineering

stop:

Art. 1 - Scope of application

The present regulation establishes the rules of application for
the control of bachelor and master studies of the section of
electrical and electronic engineering which 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 three-semester master's program, which requires 90
credits to complete the master's project.
- the 17-week master project, the successful completion of
which implies the acquisition of 30 credits, is placed under
the responsibility of a professor or MER affiliated to the
Electrical and Electronic Engineering section. On the
proposal of the professor in charge, the section may extend
the duration of the master project to 25 weeks for projects
carried out outside EPFL.

Chapter 1: Preparatory Cycle

Art. 4 - Preliminary examination

1 The propaedeutic examination includes "Polytechnic"
subjects with 41 coefficients and "Specific" subjects with 19
coefficients, distributed equally over two blocks.

2 The first block of branches corresponds to
36 coefficients and the second block of branches corresponds
to 24 coefficients.

3 The propaedeutic examination is passed when:
- the student has obtained, at the end of the winter semester,
an average of 3.50 or more in the first block, which is a
requirement for entry into the spring semester, and
- that, at the end of the summer session, he/she has obtained
an average of 4.00 or more in each of the two blocks, 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 grade equal to or
higher than 4.00.

Chapter 2: Bachelor's Degree

Art. 5 - Organization

1 The courses in the Bachelor's program are divided
between the 2nd and 3rd years as follows
- In the 2nd year: two blocks "Basic sciences" and "Specific
subjects
and "Specific subjects" totaling 57 credits.
- In the 3rd year: two blocks "Common core" and
"Orientations" (preparation for the master's orientations) as
well as an "Option" group totalling 5 credits.
- A SHS and MGT transversal block of 8 credits divided
between the 2nd year (4 credits) and the 3rd year (4 credits).

Art. 6 - 2nd year examination

1 The "Basic Sciences" block is passed when the credits
of the 27 credits of the study plan are obtained.

2 The "Specific subjects" block is passed when the
credits of the 30 credits of the study plan are obtained.

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Art. 7 - 3rd year examination

1 The "Common Core" block is passed when the 31 credits of the study plan are obtained.

2 The "Orientations" block is passed when the 15 credits of the study plan are obtained. The student chooses course credits and 3 credits of practical work.

3 The "Option" group is passed when 9 credits are earned independently.

Art. 8 - 2nd and 3rd year examinations

The "SHS and MGT" block is passed when the 8 credits of the study plan are obtained.

Chapter 3: Master cycle

Art. 9 - Organization

1. The courses in the master's program are divided into two groups and one block, the credits of which must be obtained independently. They can lead to a specialization and/or a minor.

2. The Labs and Projects block consists of a 10-credit project, a 4-credit hands-on lab and SHS instruction.

3. Group 1 "Core courses" is composed of the courses listed in the study plan under "Master".

4. Group 2 "Options" is composed of:
   - courses from the list of group 2 "options" in the study plan under the heading "Master";
   - Supernumerary credits earned in Group 1 "Core courses";
   - an optional project of 10 credits according to paragraph 5;
   - of courses outside the study plan according to paragraph 6;
   - of courses related to a specialization or a minor according to art. 10

5. The Labs and Projects block project and the Group 2 elective project cannot be completed during the same semester.

6. Courses, counting for a maximum of 11 credit in total, may be chosen outside the list of courses in the study plan under the heading "Master's". The choice of these courses must be accepted in advance by the section director who may increase the maximum of 11 credit if the request is justified.

Art. 10 - Minors and specializations

1 In order to deepen a particular aspect of his training or to develop interfaces with other sections of the EPFL, the student can choose to follow the training offered in the framework of a minor included in the EPFL offer or/and a specialization of the Electrical and Electronic Engineering section.

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

3 The student announces the choice of a minor or specialization to his/her section no later than the end of the first semester of master's studies.

4 Students who choose a specialization to complete their master's degree must obtain 30 credits by taking courses in the specialization and take a 10-credit project in the "Labs and Projects" block in the area of the specialization.

5 The choice of courses that make up a specialization, apart from the compulsory courses, is submitted to the Electrical and Electronic Engineering Section for consultation.

6 A minor or specialization is successful when a minimum of 30 credits are earned from the endorsed branches.

7 If a minor or specialization is dropped during the course of study, the Electrical and Electronic Engineering section determines the number of validated credits to be transferred to the option group.

Art. 11 - Engineering internship

1 Students entering the Master's program must complete either a long internship (Art. 13) or a short internship (Art. 13). However, the completion of a 25-week master's project in a company exempts students from this obligation.

2 As a general rule, this 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 complete the internship at the end of the Bachelor's cycle.

3 The person in charge of the internship in the section evaluates the internship with the assessment "successful" or "unsuccessful". In case of failure, the internship can be repeated once, usually in another company.

4 The methods of organization and the criteria for success of the engineering internship are the subject of an internal regulation of the section.

Art. 12 - One semester engineering internship or long internship

1 The duration of the long internship is 4 to 6 months. Successful completion of the internship allows the acquisition of 30 credits.
2 Its realization requires that the master project be carried out at EPFL or at another university and that the student has not registered for a minor.

**Art 13 - Engineering short course**

1 The duration of the short internship is between 8 and 16 weeks. It is not credited.

2 Its realization allows the master project to be carried out either in a company or in the academic field.

**Art. 14 - Examination of the master cycle**

1 The Labs and Projects block is passed when all 20 credits are completed.

2 The "Core courses and Options" group, consisting of Group 1 "Core courses" and Group 2 "Options", is passed when credits 70 are earned.

3 Group 1 "Core courses" is passed when at least 12 credits are earned.

**Art 15 - 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.

**Chapter 4: Triangular Program in "Micro- and Nanotechnologies for Embedded Systems"**

**Art. 16- Organization**

1 The general organization of the teaching of the triangular program in "Micro- and nanotechnologies for integrated systems" (MNIS) is governed by the internal regulations of this program. The courses related to this program are provided by three institutions:
   - 1st semester: Politecnico di Torino (Polito)
   - 2nd semester: National Polytechnic Institute of Grenoble (INPG)
   - 3rd semester: École polytechnique fédérale de Lausanne (EPFL)

2 The distribution of credits is as follows:
   - 1st semester (Polito) (30 credits)
   - 2nd semester (INPG) (30 credits)
   - 3rd semester (EPFL) (30 credits)
   - the master project (30 credits)

3 The student is subject to the regulations of the institution where he/she is studying for the semester.

4 A council, called the Triangular Program Orientation Council, proposes each year the number of places open to recruitment for each of the three universities. At EPFL, the Electrical and Electronic Engineering Section is responsible for this program. EPFL students interested in this program submit their applications to this section. The latter makes an initial selection. A joint admission jury of the three universities makes the final selection of students admitted to the program.

5 The student who successfully completes the MNIS program obtains a joint degree from the three institutions stating the three official titles recognized by the national systems, namely:
   - Laurea Magistrale in Nanotechnologies for ICT by POLITO,
   - Engineering degree from the Institut National Polytechnique de Grenoble, specializing in micro and nanotechnologies for integrated systems, awarded by INP Grenoble
   - Master of Science in Electrical and Electronic Engineering, awarded by EPFL.
   The joint degree mentions the specialization "Micro- and Nanotechnologies for Integrated Systems".

**Art 17- MNIS Program Review**

1 1st semester (Polito): the single block is passed when the 30 credits of the study plan are obtained.

2 2nd semester (INPG): 3 blocks and 1 group.
   Block I" is passed when the 6.5 credits of the study plan are obtained,
   Block II" is passed when the 7.5 credits of the study plan are obtained,
   Block III" is passed when the 12 credits of the study plan are obtained,
   the "Optional courses" group is passed when at least 4 credits are obtained independently.

3 3rd semester (EPFL) : 3 blocks
   Block I" is passed when the credits 18 of the study plan are obtained,
   Block II" is passed when the 6 credits of the study plan are obtained,
   Group I" is passed when the 6 credits of the study plan are obtained.

**Chapter 5: Mobility**

**Art 18- Authorized periods of mobility**

Students of the Electrical and Electronic Engineering section can carry out a mobility stay during their bachelor year3rd and/or within the framework of the master project.

**Art. 19 – Conditions**

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

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