



Post Master's Diplomas

- *Communications for Intelligent Transport Systems*
- *Information Systems and Communications Security*

RULES AND REGULATIONS

2021-2022

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1 CURRICULUM

The 15-month Post Master's program is made up of lectures, small group sessions, projects, and an internship.

The academic program (courses, projects) takes place over a nine-month period as follows:

- A Fall semester, starting at the beginning of October through the end of February, and
- A Spring semester, starting at the beginning of March through the end of June.

Participation in all activities is mandatory.

The internship takes place over a six-month period, with the actual internship in an R&D lab or in a company lasting at least 22 weeks (between July and December).

The language of instruction is English.

Each program is supervised by a Program Committee which includes the program head and the academic supervisors of the teaching units. The Program Committee must approve the internship topic.

ECTS credits are granted for each type of teaching unit (language courses, non-technical courses, technical courses), as well as for the project teaching unit and the internship.

Table 1 and Table 2 illustrate the course content for the two Post Master's diplomas.

Table 1: Course content–Communications for Intelligent Transportation Systems

	Fall modules	Number of hours	Credits
Teaching unit: The basics of connected mobility			5
MobMod	Mobility modeling	21	2.5
Stand	Standardization activities	21	2.5
Teaching unit: Mathematical tools for engineers			5
Emsim	Emulation and simulation methodologies	21	2.5
Matheng	Mathematical methods for Engineers	21	2.5
STATS	Foundations of statistical inference	21	2.5
Malis	Machine learning and intelligent systems	42	5
Teaching unit: Communication networks			5
MobSys	Mobile communication systems	42	5
MobServ	Mobile application and services	42	5
NetMod	Large-scale network modeling	42	5
MPC	Multiparty computation and blockchains	21	2.5
Quantis	Quantum Information Science	21	2.5
Teaching unit: Humanities and Social Sciences			10
ManagIntro	Introduction to management	42	4
TeamLead	Personal development and team leadership	42	4
B_INNOV	How to adopt the right posture and move from idea to market!	42	4
RDI	Responsible digital innovation: risks, ethics and technology	21	2
CSE	The challenges of a sustainable economy	21	2
Property	Intellectual property law	21	2
Teaching unit: Languages			
	French B1, English B2	44	
Teaching unit: Project			
	Applied engineering	100	5

Spring modules		Number of hours	Credits
Teaching unit: Intelligent transportation systems			5
PlanTP	Transport planning	21	2.5
TraffEEc	Emission and traffic efficiency	21	2.5
Teaching unit: Intelligent communication systems			15
MobWat	Wireless access technologies	21	2.5
MobAdv	Mobile advanced networks	21	2.5
NetSoft	Network softwerization	21	2.5
ProtIOT	lot communication protocols	21	2.5
APPIOT	lot application protocols	21	2.5
WiSec	Wireless Security	21	2.5
Radio	Radio engineering	42	5
MalCom	Machine learning for communication systems	42	5
Teaching unit: Humanities and Social Sciences			4
Business	Business simulation	42	4
TeamLead	Personal development and team leadership	42	4
ProjMan	Project management	42	4
SATT	Sociological approaches to telecom technologies	21	2
Law	General introduction to law: contracts and business creation	21	2
Teaching unit: Languages			
	French B1, English B2	44	1
Teaching unit: Project			
	Applied engineering	100	5

The language credit is granted when students meet the following criteria:

- The English level required for the language credit is B2 assessed by an external test selected by students (for ex. TOEFL, TOEIC).
- The French level required for the language credit is B1 assessed by an external test selected by students (for ex. DELF, DALF).

The language credit is a requirement to receive the Post Master's Degree.

Table 2: Course content–Security in Computer Systems and Communications

	Fall modules	Number of hours	Credits
Teaching unit: Security in computer systems			5
SysSec	System and network security	42	5
MobiSec	Security of mobile systems and smartphones	42	5
Teaching unit: Cryptography			5
Seccom	Communications security	42	5
MPC	Multiparty computation and blockchains	21	2.5
BigSec	Security for big data and the cloud	21	2.5
Teaching unit: Application context of security–I			5
MobSys	Mobile communications systems	42	5
Imcod	Image and video compression	21	2.5
ImProc	Digital image processing	21	2.5
Malis	Machine learning and intelligent systems	42	5
Quantis	Quantum information science	21	2.5
MobiSec	Security of mobile systems and smartphones	42	5
Teaching unit: Humanities and Social Sciences			10
ManagIntro	Introduction to management	42	4
TeamLead	Personal development and team leadership	42	4
B_INNOV	How to adopt the right posture and move from idea to market!	42	4
RDI	Responsible digital innovation: risks, ethics and technology	21	2
CSE	The challenges of a sustainable economy	21	2
Property	Intellectual property law	21	2
Teaching unit: Languages			
	French B1, English B2	44	
Teaching unit: Project			5
	Applied engineering	100	5

Spring modules		Number of hours	Credits
Teaching unit: In-depth security			7.5
WiSec	Wireless security	21	2.5
Forensics	Cyber-crime and computer forensics	42	5
Hwsec	Hardware security	21	2.5
ImSecu	Image processing for security applications	21	2.5
Teaching unit: Application context of security–II			7.5
ASI	Advanced statistical inference technologies	42	5
Digital Systems	Digital systems, hardware integration–software	42	5
MobAdv	Advanced mobile networking	21	2.5
FormalMet	FormalMethods–Formal specification and verification of systems	21	2.5
APPIOT	IoT application protocols	21	2.5
Deep learning	Deep learning		2.5
Teaching unit: Opening (<i>Technical courses to select from EURECOM's catalog</i>)			5
Teaching unit: Humanities and Social Sciences			4
Business	Business simulation	42	4
ProjMan	Project management	42	4
SATT	Sociological approaches to telecom technologies	21	2
TeamLead	Personal development and team leadership	42	4
Law	General introduction to law: contracts and business creation	21	2
Teaching unit: Project			5
	100 hours	100	5
Teaching unit: Languages			
	French B1, English B2		1

The language credit is granted when students meet the following criteria:

- The English level required for the language credit is B2 assessed by an external test selected by students (for ex. TOEFL, TOEIC).
- The French level required for the language credit is B1 assessed by an external test selected by students (for ex. DELF, DALF).

The language credit is a requirement to receive the Post Master's Degree.

2 Graduating with a Post Master's Degree

The Post Master's degree is delivered to students who receive the required number of credits within the designated period based on the following terms.

2.1 Minimum number of credits required to graduate

A total of **90 ECTS credits** are required to graduate. These credits are distributed as follows:

October through the end of June: Academic curriculum–Fall + Spring semesters	Credits
Technical teaching units	35
Language courses	1
Humanities and Social Sciences teaching units	14
Projects	10

July through mid-December	ECTS
Internship (22 weeks)	30

2.2 Minimum number of credits per semester

Courses are presented in the form of teaching units (UE in French) with Components (ECUE in French). ECTS credits is granted for each type of teaching unit (UE) (language courses, SHS, technical courses), as well as for the project teaching unit and the internship. Each component (ECUE) has a set number of ECTS credits and a coefficient used to calculate the weighted average within teaching units.

An average is calculated using the numerical grades obtained in the components of a teaching unit, and by applying the coefficients:

- If the average mark of the teaching unit is greater than or equal to 10/20, the student receives the ECTS credits of said teaching unit.
When the student has taken more components than necessary in a teaching unit, the most favorable configuration for the student is used to calculate the weighted average.
- In the other cases, the student is authorized to take the tests at the 2nd session for the components with a grade below 10/20.

2.3 Teaching Committee

The Teaching Committee reviews the results of all students who are administratively registered in the year. It also makes sure that every student is treated equally across all programs, and its decisions are final. The Teaching Committee is made up of EURECOM's permanent research professors, a representative of Academic Affairs, a representative of the founding member, and representatives of the academic members. Four students (including the President of the Students Association [BDE], and three students elected by the student body) also attend the meetings but without voting rights. The committee is chaired by the Scientific and Academic Director.

The Teaching Committee makes the final decision on:

- The validation of the year
- The possible validation of one or several teaching units with the level "Partially acquired"
- The admission, with a teaching unit "with a debt"
- The terms to repeat a course
- The possibility to repeat a year or the exclusion of failing students
- The requests for a gap year

The teaching Committee's decisions are communicated to students via Academic Affairs. For students who repeat a year, a study contract specifying the teaching unit to be passed successfully is issued by Academic Affairs and is co-signed by the student.

3 Exams

3.1 Terms

Teaching units are assessed based on written and oral exams scheduled at the end of each semester.

The organization of these exams falls under the responsibility of the course professors.

Grades are sent to students within two weeks.

Projects are evaluated based on a written report and an oral presentation.

Students must attend the examination sessions of the courses in which they are registered. Absences from exams without a medical certificate written in French or English and sent to Academic Affairs will result in the cancellation of the relevant credits without the possibility of a make-up session.

Any misbehavior during exams will result in their nullification, and disciplinary sanctions may be taken by the Teaching Committee.

Each exam and project is graduated on a 20-point scale.

Internships are defended in front of a jury made up of the academic head and an outside expert who may be the industrial supervisor.

Internships are assessed on five criteria: time management, conceptual work, outcomes, report and presentation. Individual grades for the five criteria are combined and weighted as follows: coefficient 1 for time management, report and presentation, coefficient 2 for conceptual work and results. To obtain the 30 internship ECTS credits, students must receive a final grade of at least 10 over 20.

Only one internship defense is allowed, except in the case of a medical reason duly justified by a doctor.

3.2 Makeup examination session

A makeup session is possible for each component and for the project.

If after the makeup exam, a student does not obtain a grade of at least 10 over 20 for a teaching unit, the corresponding ECTS credits are not validated.

The organization of makeup exams falls under the responsibility of the course professors. Their dates depend on the time constraints laid out in section 3.3.

Semester projects can be made up based on the terms set by the Teaching Committee.

3.3 Time constraints

Before being able to start an internship, students must have validated the credits of at least 2 technical teaching units in the Fall semester before May 31.

This means that students who wish to repeat an exam for a Fall semester course need to discuss with the relevant faculty members to ensure they receive the result of that exam before May 31.

4 Failures

4.1 Failed Fall semester results

The Teaching Committee may decide to exclude from the program students who do not obtain the credits of at least 2 technical units for the Fall semester by May 31.

Students who are excluded are not allowed to begin their internships. They are allowed to attend the first examination session in the spring, but not the makeup session. Upon request, a student can obtain a credit certificate showing the credits validated.

4.2 Failed Spring semester results

Students who do not obtain the minimum number of credits in the technical or non-technical units or in the term project may have to repeat their year of study. The Teaching Committee will examine their case to decide whether they are allowed to repeat their year. In all cases, credits that have been obtained that year are still valid.

4.3 Other failing cases

Students fail if they do not validate their language credit for the certification of the B2 level in English and B1 in French. The same applies to students who do not validate their internship.

5 CONDITIONS FOR EXCLUSION

The Teaching Committee can decide to exclude a student after interviewing him/her for the following reasons:

- Insufficient number of credits based on the rules laid out in section 4 "Failing situations".
- Disciplinary reasons: the student did not comply with the responsibilities set out in the Academic Charter.

6 Validation of students' results

The Teaching Committee meets at the end of each semester to review students' results.

The committee validates all the results required to graduate.

Date: 09/27/2021

Ulrich FINGER

Director
EURECOM

Student last name, first name and signature