



MASTER "LIFE SCIENCE AND HEALTH"

SINO-FRENCH PROGRAM

University Evry-Val-d'Essonne (UEVE)
 University Paris-Saclay (UPSaclay)

Huazhong University of Sciences and Technology (HUST)

Stages for the Chinese-French Master "Life Science and Health"

Year	Sem .	Chinese students	French students	
		L1	L1	
		L2	L2	
2016-2017		L3	L3	
2017-2018	S1	L4 / M1	M1	French Bachelor
	S2	L4 / M1	M1	
2018-2019	S3	M2	M2	Chinese Bachelor
	S4	M2	M2	
				French Master

Colors indicate the country where the courses take place: red in China, blue in France.

The first semester (S1, S3) takes place from September to January

The second semester (S2, S4) takes place from February to June

Recruitment of students

- Teaching will be delivered in English in lectures and tutorials during both years. Students must therefore have a sufficient scientific level
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- The motivation of the students will be assessed through an interview.

FIRST SEMESTER MASTER IN CHINA

Details of the courses

Subjects Teaching Units (TU)	ECTS	Hours of "face to face" teaching
Scientific bases	10	100
Chinese or French	2.5	25
English	2.5	25
6 Teaching Units	15	150
Total	30	300

ECTS: European Credits Transfer System

1. Scientific bases

They are composed of the following TU:

- 33h of **Genetics and Genomics** (19.5h lectures + 13.5h tutorials)
- 33h of **Cell Biology** (19.5h lectures + 13.5h tutorials)
- 34h of **Biochemistry and Signaling** (20h lectures + 14h tutorials)

2. Teaching Units

During the first year students must learn the fundamentals in the following disciplines:

- **Cell Biology** (notably in the fields of cancer biology and stem cells biology)
- **Genetics and Genomics**
- **Immunology** (fundamental immunology, immuno-pathophysiology and immunotherapies)

Consequently in order to acquire the fundamentals required, students will follow the six following TU, which are a deepening of the scientific bases, necessary to learn the Biotherapies:

- **Genetics of complex diseases: methodological aspects** (16h lectures + 9h tutorials)
- **Regulation of gene expression** (16h lectures + 9h tutorials)
- **Cell Signaling and Communication** (16h lectures + 9h tutorials)
- **Physiology of the immune system** (16h lectures + 9h tutorials)
- **Deepening Immunology and Immunotechnologies** (16h lectures + 9h tutorials)
- **Neurobiology** (16h lectures + 9h tutorials)

Each TU accounts for 2.5 ECTS.

3. Chinese / French

Chinese students will acquire a basic knowledge in French, in Chinese for French students, in order to be able to exchange in both languages.

SECOND SEMESTER MASTER IN FRANCE

Details of the courses

Subjects Teaching Units	ECTS	Hours of "face to face" teaching
Scientific Project	5	50*
Internship	10	100**
Chinese or French	2.5	25
English	2.5	25
4 Teaching Units	10	100
Total	30	300

*In the lab, once a week, for 8 weeks

** In the lab for 7 weeks (full time)

1. Scientific Project

- The Scientific Project and the Internship are linked.
- The Scientific Project must be established with a professor or a researcher, which will be the future internship supervisor. The duration of this Unit is 8 weeks, with a frequency in the lab of one half day per week. Writing a report of about 10 pages, introducing the project and the approaches which will be further developed during the internship, will validate the Unit.
- The Scientific Project will also allow the validation of the English Unit at the 2nd semester: during an intensive week, the student will prepare an oral presentation in English in relation with the Scientific Project (5 min presentation plus 5 min discussion).
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2. Internship

The Internship concerns a full-time 7-8 weeks training into a research laboratory. The students will write a report with the results obtained during the Internship. An oral presentation and this report will validate the Unit.

The French students will have to take contacts with laboratories during the third year of their Bachelor. Laboratory addresses are displayed on the web site of the university Paris-Saclay. The Chinese students will perform their internship in a research laboratory in France.

SECOND SEMESTER MASTER IN FRANCE

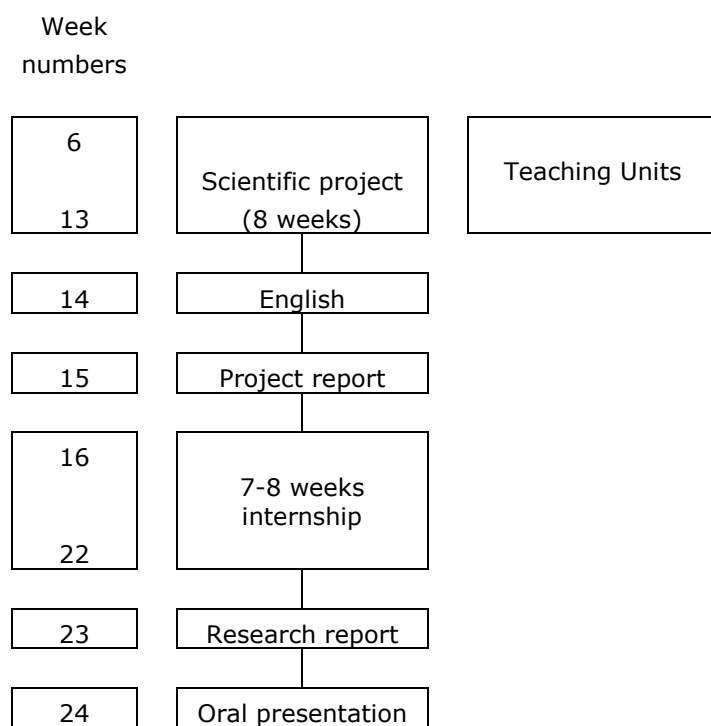
3. Teaching Units

Students will follow the four following TU, which are a deepening of the preceding TU:

- **Cell Biology 2** (9h lectures + 8h tutorials + 8h practical work)
- **Applied Genomics** (16h lectures + 9h tutorials)
- **Immuno-pathophysiology** (16h lectures + 9h tutorials)
- **Animal Transgenesis** (16h lectures + 9h tutorials)

Each TU accounts for 2.5 ECTS.

4. Schedule of the Scientific Project, Internship and Teaching Units.



THIRD SEMESTER MASTER IN FRANCE

Master in Tissue, Cell and Gene Biotherapies (BTCG)

1. Preparation of the 6-months internship (September – October)

Students will take contacts with laboratories from the beginning of the first semester, during their presence in China, in order to define an internship project.

During these two months of the 3rd semester, students will prepare their internship project: - study of the literature, presentation of an article on the subject (TU8, week 47).

- presentation of the training project including the aim of the study, the experiments carried out, the techniques used, the Gantt chart, and an eventual backup plan (TU7, week 50).

When arriving in the laboratory, the internship must be totally prepared.

2. Conferences given by researchers. No tutorials. (November – December)

TU ORGANISATION of the M2 BTCG RESEARCH MAJOR	ECTS		HOURS	
			CM	TD
TU1 Fundamental Basics of Biotherapy	5			
TUc 1a: Specific Tools of Biotherapies		3	30	
TUc 1b: Animal Models		2	20	
TU2 Biotherapy Scopes	5			
TUc 2a: New Therapies for Genetic Diseases		2	20	
TUc 2b: Regenerative Medicine		1.5	15	
TUc 2c: Transfusion and biotherapies		1.5	15	
TU3 Immunotherapy	4			
TUc 3a: Antineoplastic Strategies		2	20	
TUc 3b: Immunotherapies for immune diseases		2	20	
TU5 High Throughput analysis and Gene Editing	4		40	
TU7 Presentation of training project	2			10
TU8 Scientific Watch and Communication	10			10
TOTAL (HOURS)			180	20

TUc 1a and TU5 are held at UEVE, the other TU at UPEC (Créteil).

FOURTH SEMESTER MASTER IN CHINA

TU 10 **Internship**: 6 months from January to June.

Students will

- write a report of about 30 pages (introduction, material, methods, results, discussion, literature, figures),
- defend the work performed during the internship: 15 min plus 10 min discussion with the jury.