

INTERNATIONAL MASTER'S DEGREE



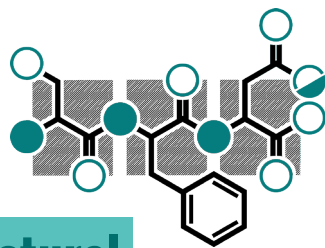
Structural and Functional Biochemistry

A high level training in cutting edge biotechnology for a successful occupational integration

UNIVERSITÉ TOULOUSE III - PAUL SABATIER

Faculté des Sciences et Ingénierie

An international Master's degree program based on a solid training in structural and functional biochemistry



Students will be offered theoretical and technical training in most of the cutting-edge techniques in this field. All lectures and exams will be given in English.

Students will be required to select 3 courses among the 5 following items, in order to tailor their program of study to suit their academic and career goals:



- **Molecular biology:** cloning, mutagenesis, gene expression



- **Structural biology of macromolecules:** NMR, X-ray crystallography, electronic microscopy, molecular modeling



- **Biophysics:** super-resolution microscopy, small-angle X-ray scattering, calorimetry, circular dichroism, analytic ultracentrifugation



- **Proteomics:** MS-based approaches for global characterization of proteomes and interactomes and structural exploration of proteins



- **Metabolomics:** MS or NMR-based methods for metabolomics and fluxomics

Mandatory courses in **Sample preparation, Statistics and Management/Communication** will also be offered. In addition, students will have the opportunity to deepen their knowledge performing a scientific/technological project within the frame of academic or professional themes.

• Courses benefits

This Master's degree will permit students to acquire strong skills in the techniques currently used to identify molecules and/or to study their structure and their interactions. Students will get a full vision of the different approaches and will develop their critical mind in solving biological issues. They will also benefit from a solid, thorough training in the art of thinking and presenting results through an extensive practice in clear reasoning, critical analysis, and deciphering complex subjects.

• Prospective students

Students originating from a first year of Master's in the area of Biochemistry, Biotechnology or Structural Biology from any university, are invited to apply.

• Admission

Admission to this master's degree is subjected to the examination of an application file by the faculty board and to an interview (on campus or via Skype). The number of seats is limited.

The criteria considered are the transcripts of the academic work but also the motivation and personality of applicants.

• Program

The year is scheduled as follows:

SEPTEMBER OCTOBER ↑	Molecular Biology	Structural Biology of Macromolecules	15 ECTS (Choose 3 among 5, 50h each)	
	Metabolomics	Proteomics		
		Biophysics		
NOVEMBER DECEMBER ↑	Management and Communication		3 ECTS (30h)	
	Sample preparation and Statistics		2 ECTS (20h)	
	Academic Themes (thesis project)		10 ECTS (Choose 1 among 2)	
	Professional Themes (Proteomics or Metabolomics)			
JANUARY JUNE ↑	Internship Scientific project, in a lab or a company, in France or abroad		30 ECTS	

WHAT MAKES OUR EXCELLENCE AT TRAINING

➔ POSITIVE EVOLUTION

This M2, created in 2016, results from the merging of two renowned Masters 2 (M2 Research (with dissertation) and M2 Professional) each with more than 10 years of existence at UPS. This merging was decided to increase job opportunities for graduate students in academic institutes or in private companies at an international level.

➔ EXPERTISE

The faculty team in charge of the lectures is also involved in research projects in prestigious French academic labs and technological platforms. Lecturers benefit from international collaborative networks or industrial partnerships, providing students with an opening into the professional context.

➔ JOB OPPORTUNITIES

After obtaining the M2, the graduates can pursue their training with a PhD (around 65%) or be directly recruited as engineers (around 35%) in a research lab, in an academic platform or in a private company, in France or abroad (around 30%).

JOIN US

Make a winning choice in joining our renowned M2 and be successful in your occupational integration.

For more details, please contact us and visit our website:

➔ m2-sfb.contact@univ-tlse3.fr

➔ <http://master2-sfb.univ-tlse3.fr>



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