



Teaching in
english



Master of Life Science

M2 RNA & Enzymes Sciences

○ PRESENTATION

Lorraine University in Nancy, France, offers an international teaching program in English in the field of RNA molecular biology and Enzymology. The primary goal of this Master 2 program (second year of master) is to provide a unique opportunity to study these molecular aspects of cellular metabolism with experts in the field.

The Master 2 program “RNA/Enzymes Sciences” (RNAES) is underpinned by high-standard scientific environment provided both by the BioPole of Lorraine University and by associated and partner labs in close proximity to Nancy.

The *BioPole building*, constructed in 2011, hosts the IMoPA CNRS-UL research unit, which focuses its activity on fundamental and applied aspects of molecular enzymology, RNA biology and bioengineering. The research groups located in the BioPole benefit from the presence of state-of-the-art facilities covering all aspects of structural biology, proteomics, high-throughput DNA sequencing and imaging.

○ ACCESS

Capacity	20 candidates
Access: background record and interview	
RNAES is opened to students granted after a 1 st year of a Master program in Biochemistry, Molecular Biology (or equivalent, e.g. 4 y. BSc). Applications will be examined by the application commission. An interview (telephone and/or face-to-face) is often proposed.	

○ AIMS

The students will acquire both theoretical and practical knowledge in biochemistry, molecular and cellular biology of RNAs and enzymology.

By the end of the Master 2 Program, the students should be able to conduct a research or industrial project in an autonomous manner. Specifically, the students should be able to understand the scientific question(s), elaborate possible solutions, and conceive and execute an experimental protocol. They should also be able to interpret experimental data, and to present results in both oral and written form.

○ PROGRAM

The Master 2 will cover various topics in RNA biology and enzymology. The table below details the different teaching modules.

○ ORGANISATION

S9	UE 930 Research project and development (3 ECTS)
	UE 931 Management and communication (3 ECTS)
	UE 932 Omics analysis & bioinformatics (3 ECTS)
	UE 933 Advanced genetic engineering (3 ECTS)
	UE 934 Methods for studying RNAs, proteins and complexes (3 ECTS)
	UE 935 Biomolecules engineering and biocatalysis (3 ECTS)
	UE 936 Practicals (3 ECTS)
	UE 937 Fundamental RNA and enzyme sciences (3 ECTS)
	UE 938 RNA engineering (3 ECTS)
	UE 939 RNA functions in normal and pathological conditions (3 ECTS)
S10	UE 1000 Internship (6 months, 30 ECTS)

○ CONTACTS

- **Head** : Mathieu Rederstorff (MCU), mathieu.rederstorff@univ-lorraine.fr
- **Secretary** : Karine Jacquot, karine.jacquot@univ-lorraine.fr
- **Website** : <https://fst.univ-lorraine.fr/formations/master-sciences-du-vivant/>