

MASTER MP²

Microbiology and Physicochemistry
for food and wine Processes



L'INSTITUT
agro Dijon



INTRODUCTION

MP² is a Master's degree, course-based, full-time international research master focused on Microbiology and physico-chemistry applied to food and wine processes. This master aims at training future researchers and managers of the food and wine science and industry.

You ...

ARE

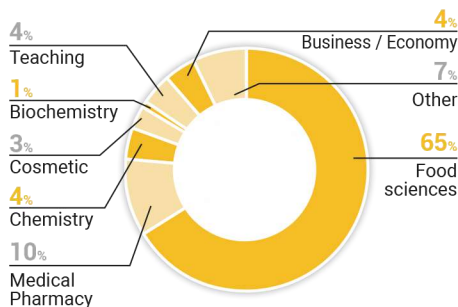
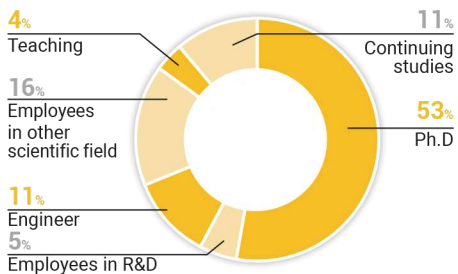
- INTERESTED IN INNOVATION AND RESEARCH ON FOOD SCIENCE
- STUDENT IN 1ST YEAR OF MASTER IN FOOD SCIENCE, BIOLOGY, PHYSICAL CHEMISTRY OR ENGINEERING SCIENCE

NEED TO OBTAIN PROFESSIONAL SKILLS IN FOOD AND WINE RESEARCH

The MP² master Degree aims at providing students with job-relevant competencies and skills for a career as research project leader in academic laboratories, research institutes or R&D departments of international companies. The expertise will be in the field of microbiology and microbiological processes, chemistry and physical chemistry applied to food and wine science. Students will be encouraged to continue with a PhD after this master degree.



MP²: WIN-WIN OPPORTUNITY TO DEVELOP FOOD FOR FUTURE





ORGANIZATION

You will have a strong international mobility. One semester will be out of France in the first year and another one is possible during the second year. The teaching units below are indicative of those offered in this program. This list is based on the current organization and may change year to year.


Schedule of formation

1st year **60 ECTS**

<p>1st semester: 30 ECTS Dijon, France</p> <p>Topics of the courses: Methodology and tools, statistics, introduction to sensory evaluation, food composition and nutrition, microbiological risks and processes, food chemistry and physicochemistry</p>	<p>2nd semester: 30 ECTS</p> <ul style="list-style-type: none"> • Academic Mobility • European Universities or International partners. <p>Topics of the courses: Analytical chemistry, biotechnology, bioinformatics, chemistry, microbiology, heat and mass transfer, physical chemistry, food technology and processing.....</p> <p>Training</p>
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2nd year **60 ECTS**

<p>1st semester: 30 ECTS Dijon, France</p>	<p>2nd semester: 30 ECTS Research Training (France or International)</p>
<p>OPTION 1</p> <p>New insights in microbiology and food processes</p> <p>Unit 1 : Toolbox and project management</p> <p>Unit 2A : Microbiology applied to food safety : pathogen and flora alterations</p> <p>Unit 3A : Interaction and adaptation of microorganisms to their environments</p> <p>Unit 4A : Food and wine design by the mean of microbiology</p> <p>Unit 5A : Food processes and emerging technologies</p>	<p>OPTION 2</p> <p>New insights in chemistry and physicochemistry for Food design</p> <p>Unit 2B : Food and wines analysis</p> <p>Unit 3B : Food and wine stability</p> <p>Unit 4B : Food design by the mean of physicochemistry</p> <p>Unit 5B : Chemistry and toxicology applied to food safety</p>
<p>Unit 6 : Project and training</p>	





REGISTRATION

Admission requirements

- **1st year:** bachelor's degree or equivalent in biology, food science, chemistry, physical chemistry or engineering science
- **2nd year:** admission open to graduate students with a Master degree or equivalent related to biology, chemistry or physical chemistry
- **Motivation** and professional project
- **Relevance of academic background** and quality of the candidate's academic records
- **Level in English:** B2 required for the two years

Contacts



Stéphane GUYOT
L'Institut Agro Dijon

✉ stephane.guyot@agrosupdijon.fr



Elias BOU-MAROUN
L'Institut Agro Dijon

✉ elias.bou-maroun@agrosupdijon.fr



I integrated the master degree of Food Science of the University of Burgundy. During the first year, my two months internship, on physical chemistry of dairy drinks, made me understand that I wanted to continue in the research field. The multidisciplinary approach of the courses and the internship of 6 months proposed during the second year, allowed me to follow by a PhD. I am now leading researches on iron encapsulation in biopolymer gels, topics at the cross section of physical chemistry, chemistry and biochemistry with possible application in food, pharmaceutics and health sciences.

Aline Maire Du Poset, PhD Student,
UMR PAM, Team PCAV, AgroSup
Dijon



**For administrative
information**



Nathalie DENIS
L'Institut Agro Dijon

✉ MP2@agrosupdijon.fr



<https://institut-agro-dijon.com/>

L'Institut Agro



5 000
students



300
teachers-researchers



1 380
staff



35
labs



1st

place in France in THE Impact Rankings, which assesses universities in relation to the UN's sustainable development objectives.



PAM Lab

Food and Wine Science
& Technology

(<https://umr-pam.fr/en/>)

Quality of life in Dijon



30 571
students, student
life is tremendously
dynamic



Historic
heritage
An exceptional
historic city centre



Unesco
world heritage
classification



Culture
8 free museums,
6 free libraries, 13
theaters, 28 movie
theaters



90
minutes
to ski resort



Sport
50 disciplines
on the campus,
welcoming top
level athletes



Cité internationale de la
Gastronomie
et du vin



LOCATION IN FRANCE

Dijon is less than 2 hours by train from Paris, Lyon, Strasbourg, Lausanne and Basel.

