Master in Sciences and Technologies for Agriculture, Nutrition and Environment (STA2E)
Aix Marseille University & Avignon University

Specialty: Environmental Biology and Biotechnology (EBB) - Aix Marseille University

OBJECTIVES

The new master « Science and technologies for Agriculture, Nutrition and Environment » (STA2E), will concern issues related to agronomy, agro-food industry and sustainable development.

Teaching content will include the basics of applied research themes from the participating university or research institute laboratories (see list below) but also the activities of, small or large, regional and national companies involved in agro-food, agronomy or environment. A strong partnership was established with the National Agronomy research Institute (INRA) centre of the Provence Alpes Côte d’Azur region. Specifically, the EBB speciality will train about 25 students per year to reach a high level in molecular biology, genomics, genetics and biochemistry of organisms that shape the environment such as plants, microalgae, fungi and microorganisms, and including the bioeconomy (risk evaluation, toxicology, bioenergy and bioremediation, plant breeding and biotechnologies). The teaching team is composed of Aix Marseille University professors and lecturers together with researchers from basic or applied research institutes (CNRS, CEA,IRD, INRA) or biotech companies.

JOB OPENINGS

Research engineers within small or large companies of the agro-food, energy, bio-production industries or others biotechs. Engineer in genomics or plant breeding in the public or private sector, patent offices, regulatory agencies, food sector (traceability).

Following a PhD: research or engineering the public or private sectors, project management, lecturer
1st year (M1): Pre-enrolment and interviews for students with a bachelor degree (3 years in University) in Biology/Life Science or equivalent.

2nd year (M2): For students others than from the M1 BBE, a detailed CV with a recommendation letter from the initial formation specifying the ranking of the student will be required for pre-enrolment screening.

STUDENT ADMISSION

M1: Semester 1
- English
- Professional project training
- Experimental methodologies
- Toxicology
- Risk and tracability
- Microbiology
- Integrative nutrition and metabolism
- Genomics
+ Practical Research Initiation

M1: Semester 2
- Interactions Host pathogens and symbionts
- Light and Energy
- Environmental adaptation of photosynthetic organisms
- Cell and developmental Biology
- Biology and application of fungi
- Biotechnology
- Options (Virology, Biologie and Society - Scientific communication, others)
+ Laboratory internship (7 weeks)

M2: Semester 3
All in e-learning, AMeTICE platform
- Bioenergy and bioremediation
- Diversity and adaptation of microorganisms
- Photosynthetic organisms
- Plant breeding
- Biotechnology for sustainable development

M2 - SEMESTER 4: Internship in laboratory or industry

CONTACTS
Christophe Robaglia christophe.robaglia@univ-amu.fr
Christophe Laloi christophe.laloi@univ-amu.fr
Stefano Caffarri stefano.caffarri@univ-amu.fr

Sites web:

PARTNER RESEARCH LABORATORIES
UMR 7265 CEA-CNRS-AMU Biologie végétale et microbiologie environnementales BIAM
http://biam.cea.fr/dr/biam

UMR 1163 INRA-AMU Biodiversité et Biotechnologie Fongiques BBF
https://www6.paca.inra.fr/umrbcf

UMR 7281 CNRS-AMU Bioénergétique et Ingénierie des Protéines BIP
http://bip.cnrs-mrs.fr/

UR INRA 1052 – Génétique et amélioration des fruits et légumes GAFL
https://www6.paca.inra.fr/gafl

+ companies and other laboratories in France or abroad (for internships)