



NATIONAL INSTITUTE FOR LIFE, FOOD AND HORTICULTURAL SCIENCES AND LANDSCAPING

Join our **AGROECOLOGY program** for 1 semester as an exchange student and **get 30 ECTS!**



AGROCAMPUS OUEST 's Agricultural Engineering MSc in **AGROECOLOGY** is based on a transdisciplinary approach of agroecosystems with a highlight on agronomical, ecological, environmental, economic and social issues.

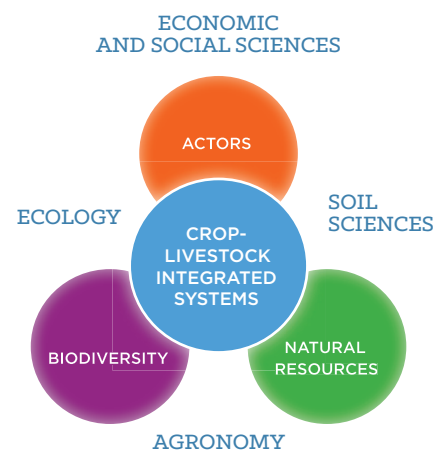
AGROECOLOGY at AGROCAMPUS OUEST

Rennes, France

From September 2017 to January 2018*

Our program prepares students for a WIDE RANGE OF MISSIONS:

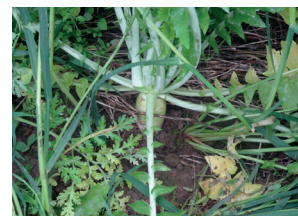
- **Emphasize** positive interactions within agroecosystems in order to propose agroecological practices which encourage functional biodiversity and appropriate crop rotations and help the natural regulation of populations and the management of bioagressors
- **Manage** soil fertility and complete biogeochemical cycles by developing synergies between livestock farming and crops
- **Develop** a systemic vision of agroecosystems to support, improve and increase farm sustainability
- **Evaluate** farm sustainability through multicriteria assessment including biodiversity, natural resources and the society
- **Help** farmers evaluate the relevance of their practices and compare them with those of other farmers, and encourage them to design possible changes
- **Reflect** and open up to new ideas while considering the goals, needs and interests of the stakeholders
- **Contribute** to the development of transdisciplinary research in agroecology.



Emphasis is given to the integration of disciplines focusing on crop-livestock integrated systems that value and preserve biodiversity.

* A shorter semester between September to December 2017 is possible under certain conditions

TU 1. An introduction to Agroecology (1 ECTS)	
TU 2. Global socio-economical analysis (3 ECTS)	<ul style="list-style-type: none"> • Historic views of agroecology, from social movements to scientific concepts • Public support for agroecology
TU 3. Theoretical basis of agroecosystem functioning (8 ECTS)	<ul style="list-style-type: none"> • Theories of ecology and biodiversity measurements • Soil fertility and ecosystem services • Basics on animal sciences and livestock farming • Ecology and biodiversity (interactions between soil/plant/organisms) • Landscape management and biogeochemical flows • Modeling applied to agroecology
TU 4. Sustainability analysis of agroecological agroecosystems (4 ECTS)	<ul style="list-style-type: none"> • Multicriteria analysis applied at a farm scale • Economy • Evaluation and change proposals
TU 5. Management levers of agroecological agroecosystems (5 ECTS)	Agroecological management of soil fertility, plant health, forage resources, plant breeding
TU 6. From functional ecology to an integrated management of crop-livestock agroecosystems (4 ECTS)	<ul style="list-style-type: none"> • Soil biodiversity and biochemical cycles • Plant composition, forage quality • Closing biochemical cycles by animal waste re-use and crop diversification • Land use for animal production : introduction of agroforestry • How to support farmers in managing agroecosystems
Statistical and spatial engineering tools (1 ECTS)	
Trandisciplinary project (4 ECTS)	



Application Deadline

June 30th, 2017

Requirements

Bachelor's degree with a background in Agronomy, Crop science, Animal science, Soil science, Ecology, Economic and Social sciences.

B2 level English proficiency.

More info & Registration

student.mobility@agrocampus-ouest.fr

Program Features

- Individual and group-based learning
- Short projects on experimental sites
- A transdisciplinary project in a real farm

The aim is to test and practice the knowledge and skills acquired by the students through the lectures and seminars.

- All courses in English

Support offered by AGROCAMPUS OUEST

- Single Welcome Desk
- Free French Language Courses
- Housing Support