



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!**



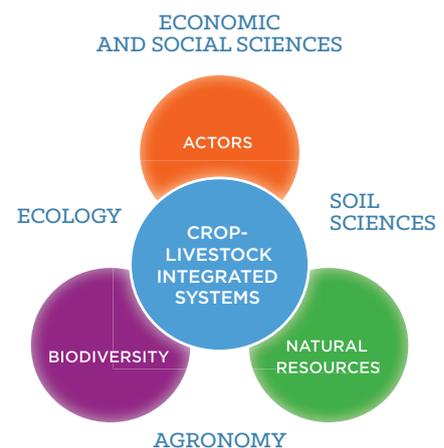
AGROCAMPUS OUEST 's Agricultural Engineering MSc in **AGROECOLOGY** is based on a transdisciplinary approach of agroecosystems with a highlight on agronomical, ecological, environmental, economic and social issues.

# AGROECOLOGY at AGROCAMPUS OUEST

Rennes, France  
From September to January\*

## 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 is possible under certain conditions

<b>TU 1.</b> The challenges of Agroecology (1 ECTS)	
<b>TU 2.</b> Global socio-economical analysis (2 ECTS)	<ul style="list-style-type: none"> <li>• Global socio-economical analysis</li> <li>• Microeconomic analysis &amp; public support issues</li> </ul>
<b>TU 3.</b> Theoretical bases of agroecosystem functioning (7 ECTS)	<ul style="list-style-type: none"> <li>• Biodiversity in agroecosystems</li> <li>• Soil quality and ecosystem services</li> <li>• Landscape management and biogeochemical flows</li> <li>• Basics on animal science and livestock farming</li> <li>• Ecological theories and biodiversity measurement</li> <li>• Modeling applied to agroecology</li> </ul>
<b>TU 4.</b> Sustainability analysis of agroecological agroecosystems (3 ECTS)	<ul style="list-style-type: none"> <li>• Economy for agricultural practice analysis</li> <li>• Farming systems sustainability assessment</li> </ul>
<b>TU 5.</b> Agroecosystem Management Levers in Agroecology (6 ECTS)	<ul style="list-style-type: none"> <li>• Agroecological management of forage resources</li> <li>• Agroecological management of soil quality</li> <li>• Agroecological management of plant health</li> <li>• Plant breeding in agroecology</li> </ul>
<b>TU 6.</b> Plant, Soil, Animal interactions (4 ECTS)	<ul style="list-style-type: none"> <li>• Plant, soil, animals interactions analysis</li> <li>• Pasture model and scenarisation</li> <li>• Agroecology consultancy</li> </ul>
<b>TU 7.</b> Statistical and spatial engineering tools (2 ECTS)	<ul style="list-style-type: none"> <li>• Statistical tools for data processing</li> <li>• Spatial analysis and GIS</li> </ul>
<b>TU 8.</b> Professional Project & Bibliographical Report (2 ECTS)	
<b>TU 9.</b> Languages (3 ECTS)	<ul style="list-style-type: none"> <li>• English</li> <li>• German or Spanish</li> </ul>



## Application Deadline

June 15<sup>th</sup>

## Requirements

### Bachelor's degree

With a background in Agronomy, Crop science, Animal science, Soil science, Ecology, Economic and Social science

**B2 level** English proficiency.

## More info & Registration

[www.agrocampus-ouest.fr](http://www.agrocampus-ouest.fr)

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## Training Officials

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## Program Features

- Individual and group-based learning
- Short projects on experimental sites and a transdisciplinary project in a real farm
- Active participation of professionals and scientific partners
- All courses in English

## Teaching Staff

Plant Sciences Applied to Agriculture & Horticulture	S. Menasseri, E. Le Cadre, O. Godinot, A. Laperche, M. Carof & M. M. Manzaneres-Dauleux
Physical Environment, Landscape Architecture & Territorial Development	G. Pérès, C. Darrot, Ph. Boudes, A. Jaffrezic, C. Walter, B. Lemercier & D. Michot
Ecology	M. Plantegenest, F. Val, A. Le Ralec, J. Haury, Ch. Le May, D. Barloy, F. Hamelin & Y. Outreman
Animal and Food Sciences	A.L. Jacquot, J. Flament, C. Disenhaus & Y. Le Colzer
Economics, Management & Society	A. Carpentier & C. Laidin

## Support offered by AGROCAMPUS OUEST

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

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