

# Msc engineering specialisation

## PLANT SCIENCE AND ENGINEERING

### Curriculum: Seeds and plant propagation

#### CONTEXT AND OBJECTIVES

Seeds and propagating material are at the basis of agriculture and horticulture performance. By producing high quality and innovative material, the sector addresses global issues related to food security, climate change, agroecology and sustainable agriculture. The seed sector is driven by innovation, science and research, and IP representing a market of nearly 12 billions US \$ worldwide. It encompasses a wide diversity of companies, from small specialised companies to multinationals.

Located in the heart of a major European seed and transplant production basin, l'Institut Agro Rennes-Angers offers a unique Master 2 level programme for French and international students with a strong interest in propagating plant material for a sustainable agriculture and horticulture. The objective is to train students into skilled professionals in all sectors of seeds and plant propagation.

The curriculum **Seeds and Plant Propagation** is dedicated to the diverse range of seeds and clonal material to ensure successful crop establishment. It is based on interdisciplinary courses that integrate biology, production technologies, conservation strategies, data management and experimental design along with business management, intellectual properties and regulations. Through personal and team work with class mates, students also develop capacity for self-learning through professional projects.

#### POSITIONS AND PROFESSIONAL INTEGRATION

- + By completing the curriculum, you will be able to access attractive and diverse positions such as seed biologist and technologist, plant pathologist, production manager, product development manager, commercial technical representative, customer service representative.
- + You may hold positions in private companies in the R&D or marketing/ legal divisions from small specialized companies to multinationals. You can also work for the public sector in technical institutes, syndicates, non profit organisations as consultant, project manager.
- + Interested students can pursue with a Ph.D. programme.

#### Situation of graduates 6 months after graduation

88%

Net Employment  
rate

17%

In pursuit of thesis  
studies

27,5  
K€

Average  
annual salary

Source : Employment survey 2022  
(graduates 2021, 2020, 2019 - response rate 84 %)

#### Place of training

Angers ● Rennes ○

#### Initial training under student status

Open in Msc Engineering

Agriculture ●

Food science ○

Horticulture ●

Landscape ○

#### Initial training under apprentice status

Open in Msc Engineering

Food science ○

Horticulture ●

Landscape ○

#### Pooling of courses with:

Master 2 Seeds and Plants ●

(Co-accreditation with University of Angers,  
University of Nantes)

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#### PROGRAMME

All courses are offered in English and opportunities exist to learn French for daily life purposes. The curriculum is delivered by faculty members from l'Institut Agro Rennes-Angers and the University of Angers, researchers from INRAE as well as industry professionals.

> M2 LEVEL | SEMESTER 9 | 30 ECTS

#### 4 Teaching Units (TU)

**TU 1 • Knowledge of the seed and plant propagation industry**  
(French and International Industries, Intellectual property and business strategies, Entrepreneurship)

**TU 2 • Biology and management of seeds and propagation material**  
(Big data, Phenomics and genomics, Biotechnology, Seed conservation and plant genetic resources)

**TU 3 • Seeds and clonal material: production and postharvest and technology**  
(Sanitary quality, Production and seed technology, Biocontrol and biostimulation)

**TU 4 • Communication and action learning**  
(Industry commissioned project, Foreign language: choice of English, German or Spanish)

> M2 LEVEL | SEMESTER 10 | 30 ECTS

Six-month internship (from mid-February to August)

#### ADMISSION IN M2

> INITIAL TRAINING  
TOEFL (Toefl) English B2 level required

##### French Students

- Formation open to students from l'Institut Agro Rennes-Angers who have validated their M1 in Msc Engineering in Agriculture and Horticulture.
- Holders of an M1 Engineer or equivalent level, from other formation/institutions of Higher Agricultural Education: on application file and interview in English. These students will receive a transcript of ECTS credits to be submitted to their home school for their graduation.

##### International Students

- Formation accessible via the DE competition following their admission to full-time M1 in Msc Engineering in Agriculture and Horticulture: Application with Campus France.
- Formation open during the exchange semester for students from a partner establishment of the school. At the end of their mobility, students receive an ECTS transcript / credit report to be submitted to their home university for graduation.

Further information: [seeds@agrocampus-ouest.fr](mailto:seeds@agrocampus-ouest.fr)

#### > CONTINUING EDUCATION

Contact: [formco.rennesangers@institut-agro.fr](mailto:formco.rennesangers@institut-agro.fr)

#### CURRICULUM OFFICERS

