# International Master’s Degree In Agricultural Sciences (IMAS)

## Objectives of the training program

The **research-oriented International Master’s program in Agricultural Sciences (IMAS)** is at the core of the **IMPLANTEUS Graduate School (GS)**, which has been designed to address the challenge of adapting Mediterranean agricultural systems for fruit and vegetable production to the constraints of global change all while fostering high nutritional quality.

**The IMAS program** includes a curriculum in English covering the fundamental aspects of plant and environmental sciences, food chemistry, food processing, microbiology, human nutrition, consumer science with a common objective of developing the production and consumption of safe and high-quality plant food in a Mediterranean context.

## This integrated research-oriented training and the financial support of research internships and international mobility aim at fostering both i) awareness to research & innovation and ii) a doctoral experience. Training program

## Training program

The IMAS program is part of the Master’s program in Agricultural Sciences (MAS), which also proposes 3 other curricula (in French) centered on plant production (C1), water & soil science (C2) and agro-food production (C3). See: <http://univ-avignon.fr/rechercher-une-formation/>

The master is fully accessible to non-French-speaking students: course materials in English, implementation of general courses in English, innovative pedagogy based on hybridization of face-to-face courses / online courses.

**Academic year 2022-2023**

[**M1S1**](https://implanteus.univ-avignon.fr/wp-content/uploads/sites/56/2022/04/SyllabusM1S1_2022-Final.docx)

* EUR specific lessons (278h, in English, multidisciplinary): microbiology (30h), toxicology (25h), integrated nutrition and metabolism of plants (31h), agronomy plants and environment (30h) ; fundamentals of ecology, evolution & genetics (20h), fundamental of plant health (20h), chemistry of natural products (15h), principles of transformation (15h), fundamentals of food sciences (30h), fundamentals of human nutrition (35h), basics of statistics and probability (27h), scientific methods (10h)

[**M1S2**](https://implanteus.univ-avignon.fr/wp-content/uploads/sites/56/2021/05/M1S2-IMAS-MODIFIE1.pdf)

* EUR specific lessons (278h, in English, multidisciplinary): history of agriculture (6h), plant ecophysiology (part 1, 24h), conventional conservation and transformation techniques (20h), micronutrients: bioavailability and health effects (part 1, 20h), safety of the production chain of fruits and vegetables (part 1, 24h), ethics & scientific integrity (6h)
* 4-month internship in the laboratory

[**M2S1**](https://implanteus.univ-avignon.fr/wp-content/uploads/sites/56/2021/05/M2S1-IMAS-MODIFIE12.pdf)

* EUR specific lessons (278h, in English, multidisciplinary): plant ecophysiology (part 2, 15h), plant breeding (parts 1 & 2, 25h), plant health (15h), agroecology (20h), green food processing, conservation & transformation (25h), formulation of food products, conservation of agro-food wastes (25h), micronutrients : bioavailability and health effects (part 2, 20h), safety of the production chain of fruits and vegetables (part 2, 12h), consumer science (7h), data treatments & statistics (20h), modeling (20h), quality control & analysis, metabolomics (9h), imaging and techniques of internal investigation (12h)
* Collaborative project with tutoring by a partner from the socio-economic world or a researcher

[**M2S2**](https://implanteus.univ-avignon.fr/wp-content/uploads/sites/56/2021/05/M2S21.pdf)

* 6-month internship in the laboratory

*NB: seminars and summer schools (in English) with the participation of EUR international partners are an integral part of the IMAS programme.*

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