



# Universidade de Évora

## Universidade Nova de Lisboa - Faculdade de Ciências e Tecnologias

### Edital

Applications for Admission to the Master Program in  
Precision Agriculture Technologie  
Academic year 2023/2024

#### 1. The program is promoted by:

Universidade de Évora - Escola de Ciências e Tecnologia  
Universidade Nova de Lisboa - Faculdade de Ciências e Tecnologias

#### 2. Study program in Consortium:

- a. **Type of Consortium:** National
- b. **Type of Consortium:** Diploma to be attributed only by one of the Partner Institutions ( point (c) of article 42 of DL 65/2018)
- c. **Type of Agreement:** Rotative (administrative and financial management of the institution responsible for the edition)
- d. **Coordinator Institution:** Universidade de Évora
- e. **Partner Institutions:**
  - Universidade de Évora
  - Universidade Nova de Lisboa - Faculdade de Ciências e Tecnologias
- f. **Host Institution:** All partner institutions

g. **Host Institution:** Universidade de Évora

h. **Executive Program Committee:**

José Rafael Marques da Silva (UE/ECT)

Maria Manuela Ribeiro (UN/FCT)

### **3. Program description:**

According to current forecasts food production needs to grow 60% by 2050 to feed the entire population of the planet. This pressing need is going to bring major changes in the agricultural and food production sector in the world. The challenge is to produce more with less, as resources are increasingly scarce and impacts are increasing. In this way, the philosophical principle of Precision Agriculture makes more sense: "To treat different things differently using stable, calibrated and calibrated technologies in order to increase the efficiency of agronomic, economic, environmental and social processes".

From remote sensors (satellites) and close (geoelectrics); of intelligent equipment that manage to manage variable rates (VRT) in the application of factors of production; the Internet of Things (IoT), "machine learning" and other artificial intelligence techniques are currently generated by soil-water-plant relationships. The agronomic act is becoming radically and increasingly based on two types of intelligence, human and artificial, in order to be able to manage large amounts of information in near real time, for a timely and ever smaller decision scratches.

In association, U?vora (ECT) and UNova (FCT), based on their long experience and scientific productivity in this field, offer this master students unforgettable pedagogical experiences, as well as a unique preparation in the management of processes and technologies in Precision agriculture with a view to meet the new European challenges in the context of: i) "Green Deal"; ii) "Farm to Fork"; and iii) New CAP.

### **4. Career opportunities:**

In a broader scope, technology managers in Precision Agriculture; within a narrower scope, may from the professional point of view: i) develop geoelectric surveys in companies that study the spatial variability of the soil, as well as the intelligent study of the spatial variability of its nutrients; (ii) to develop variable application maps (VRT) of nutrients and other factors of production, namely fertilizers and seeds; iii) operate different types of GNSS, either for georeferencing of plots, soil sampling, plants and others; iv) operate different agricultural machinery and equipment, namely in differentiated management of factors of production; v) to develop works at the level of the remote sensors, namely in the processing of satellite images with agronomic applications; vi) to develop works at the level of nearby sensors, namely in monitoring the management parameters (quantity and quality) of the crops; vii) developing work on the processing of large volumes of data, using appropriate programming languages; viii) installing IoT sensors, as well as managing the acquisition of large volumes of information; ix) to work with techniques of artificial intelligence and handling of large volumes of data; (x) develop economic studies in the implementation of new technologies; (xi) to develop applied research in the field of Precision Agriculture.

### **5. Number of registration at DGES:**

R/A-Cr 39/2018

### **6. Number of accreditation process by A3ES:**

NCE/17/00119

## 7. Program Creation Norm:

Diário da República nº 154 de 10 de agosto, Aviso n.º 10992/2018 e pelo Aviso n.º 9506/2022, publicado no Diário da República, n.º 91 de 11 de maio

## 8. General conditions of access and admission:

### i Legal conditions for access to the cycle of studies leading to the master degree

The following individuals can apply for a cycle of studies leading to the master degree:

- holders of a Portuguese Licenciado degree or legal equivalent;
- holders of a foreign higher education undergraduate degree, which is recognized as satisfying the objectives of the degree of Licenciado by the competent scientific committee of the higher education institution where they wish to be admitted;
- holders of an academic, scientific or professional curriculum which is recognized as attesting the ability to carry out this cycle of studies by the competent scientific committee of the higher education institution where they wish to be admitted.

### ii Specific admission conditions

You can apply for the study cycle that leads to a master's degree in Precision Agriculture Technologies:

- a) Holders of a bachelor's degree or legal equivalent in natural sciences, agronomy, agri-food technology or related areas;
- b) Holders of a foreign higher academic degree equivalent to a 1st cycle of studies organized in accordance with the European principles of the Bologna Process in the scientific areas referred to in a);
- c) Holders of a foreign higher academic degree in the scientific areas referred to in a), which is recognized as meeting the objectives of the degree by the Scientific Councils of FCT NOVA or ECT-UEv;
- d) Holders of a school, scientific or professional curriculum in the scientific areas referred to in a), which is recognized as attesting the capacity to carry out this cycle of studies by the competent legal body of the Coordinating Institution, at the proposal of the Master Scientific Committee in Precision Agricultural Technologies

## 9. Selection Process:

- Academic qualifications: 70%
  - Level of qualifications: 25%
  - Average grade in the highest qualification: 50%
  - Area of qualifications: 25%
- Curriculum analysis: 30%
  - Professional Training in the area of the program or related fields: 30%
  - Professional Experience in the area of the program or related fields: 40%
  - Participation in research projects: 30%

## **10. Maximum number of admissions**

- Maximum number of admissions for candidates with nationality of European Union countries: 30
- Maximum number of admissions for candidates without nationality of countries of the European Union: 5

Depending on the number of applications, there may be transfer of vacancies from the international students applications to the European Union students applications or vice-versa.

## **11. Minimum number of students: 10**

## **12. Tuition fee**

- Candidates with nationality of European Union countries: 2000.00 €
- Candidates without nationality of countries of the European Union: 7000.00 €

## **13. Organization / duration:**

- a. **Duration of the program:** 4 semesters
- b. **Number of ECTS to obtain the degree:** 120
- c. **Number of ECTS to obtain the master's course (conclusion of the curricular part):**  
78

## **14. Language (s) of teaching:**

- Portuguese

## **15. Learning Type: Presential**

## **16. Schedule Type: Mixed**

## **17. Classes schedule (week days and schedule)**

Thursday (after work, 18:00 - 22:00 online);  
Friday (working day, 9:00 - 18:00 Face to face);  
Saturday ( 9:00 - 18:00 Face to face)

## **18. Program starting date: September of 2023**

February 11, 2023  
The Rector

Hermínia Vasconcelos Vilar