



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

Edital

Applications for Admission: Mestrado em Tecnologias em Agricultura de Precisão
(Precision Agriculture Technology)
Academic Year 2024/2025

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 awarded by all Partner Institutions together, pursuant to Article 42 of Decree-Law No. 74/2006, of 24 March, in its current republication
- c. **Type of Agreement:** Rotating (administrative-financial management under the responsibility of the edition host institution)
- d. **Coordinator Institution:** Universidade de Évora
- e. **Partner Institutions:**
 - Universidade de Évora
 - Universidade Nova de Lisboa - Faculdade de Ciências e Tecnologias
- f. **Specific Regulation:** No
- g. **Host Institution:** Universidade de Évora
- h. **Application place:** All partner institutions
- i. **Application dates and information:** <https://www.fct.unl.pt/ensino/mestrados>
- j. **Executive Program Committee:**
José Rafael Marques da Silva (UE) e Maria Manuela Ribeiro (UNOVA/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, UÉvora (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 and Sustainable Agro-Ecosystems.

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 n.º 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

Those who meet the following conditions may apply to the cycle of studies that leads to the master degree:

- Holders of the bachelor degree or legal equivalent;
- Holders of a foreign academic degree dully recognised as satisfying the objectives identical to the bachelor degree by the relevant scientific body of the higher education institution they wish to be admitted to;
- Holders of an academic, scientific or professional curriculum vitae that is recognized as attesting to the capacity to carry out this cycle of studies by the relevant scientific body of the higher education institution they wish to be admitted to.

ii Conditions of access to the cycle of studies at the Universidade de Évora

On the application date, the undergraduate students must satisfy conditions that guarantee the conclusion of their undergraduate degree until the 30th of October of the admission year. The admission and enrollment of these students is conditioned on the conclusion of the degree until this date, and the enrollment is canceled if the student does not complete the degree within that period

During the first application phase, students who have a maximum of 6 curricular units or 36 ECTS missing for conclusion of their degree can apply for the 2nd cycle; in the 2nd application phase students can apply if they have at most 3 curricular units missing and in the 3rd application phase if they have at most one curricular unit missing

The previous condition does not apply to students with a curriculum that reveals professional or scientific experience, which can be recognized by the competent scientific body, as attesting the students ability to carry out the masters degree/post-graduation, provided that the student required that recognition in the application process

iii 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%
 - Area of qualifications: 25%
 - Level of qualifications: 25%
 - Average grade in the highest qualification: 50%
- Curriculum Analysis: 30%

- Scientific and technical activities and publications: 30%
- Professional Experience in the area of the program or related fields: 40%
- Training in transversal competences: 30%

10. Maximum number of admissions

- Maximum number of admissions for candidates with nationality of European Union countries: 20
- Maximum number of admissions for candidates without nationality of European Union countries: 10

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

Minimum number of students: 10

12. Tuition fee

- Candidates with nationality of European Union countries: 2 000,00 €
- Candidates without nationality of European Union countries: 7 000,00 €

13. Organization / Duration

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

14. Language(s) of teaching

- Portuguese

15. Learning Type

Presencial

16. Schedule type

Mixed

17. Classes schedule (week days and schedule)

The first semester will take place at FCT NOVA University (Monte da Caparica), and the second semester will be held at the University of Évora (Évora). The theoretical courses will be offered both in-person and remotely, usually between 18:00 and 22:00. Practical courses will be conducted in person on a single day during the week, either on Friday or Saturday, depending on the year and the partner university.

18. Program starting date

September de 2024

February 11, 2024
The Rector

Hermínia Vasconcelos Vilar