

**ANNEX C**

**PhD COURSE IN  
BIOTECHNOLOGY AND SMART PRACTICES FOR A SUSTAINABLE MANAGEMENT  
OF NATURAL REOURCES, FOOD AND AGRICULTURE - XL cycle  
academic year 2024/2025**

**Coordinator:** Prof.ssa Maria Luisa Amodio (PO) - SSD: AGR/09 - University of Foggia

**Scientific and disciplinary  
sectors**

*AGR/01; AGR/02; AGR/03; AGR/04; AGR/07; AGR/09;  
AGR/10; AGR/11; AGR/12; AGR/15; AGR/16; AGR/19;  
VET/04; VET/06; CHIM/01; CHIM/06; ING-IND/08; ING-  
IND/35; ING-INF/05; FIS/01; BIO/03; BIO/04; BIO/09;  
AGR/13*

**Administrative headquarters:** DEPARTMENT OF AGRICULTURAL SCIENCE, FOOD,  
NATURAL RESOURCES AND ENGINEERING

**Lenght:**

3 anni

**Curriculum:**

**1. SUSTAINABLE AGRICULTURE, NATURAL  
RESOURCES AND BIODIVERSITY:**

Sustainable agriculture, management of natural resources and biodiversity.

Throughout this curriculum, skills for the sustainable management of natural resources and agriculture will be developed, with particular regard to precision agriculture and smart farming, decision support systems, reduction of inputs in agriculture, logistics and management of inputs and production outputs (Internet of things), quality of production, environmental protection, animal, plant and microbial biodiversity, bio-industry for the exploitation of waste and non-food products to end the cycle, biorefinery, biogenetics.

**2. EMERGING TECHNOLOGIES FOR ENSURING  
FOOD QUALITY AND SAFETY:**

Skills for the precise management of processes, logistics and management of processing inputs and outputs (Internet of things) will be developed as well as quality, traceability and safety of food products, biotechnologies and innovative technologies with low environmental impact, in order to increase the added value of the products maximizing efficiency and reducing waste; assessment of the sustainability of products and processes, strategies to increase the consumers and actors' awareness in the supply chain on environmental issues; marketing of food products obtained in a sustainable way.

**TOTAL NUMBER OF POSITIONS AVAILABLE: n. 8**

**N. 8 POSITIONS WITH SCHOLARSHIP of which:**

n. 4 positions through scholarship granted by University of Foggia

n. 4 positions through scholarship granted by D.M. 630/2024 PNRR cofunded by Enterprise

**COURSE DESCRIPTION**

**PROGRAM, OBJECTIVES AND CONSISTENCY WITH THE PNRR pursuant to the D.M. n. 630/2024**

<https://www.unifg.it/en/studiare/corsi-post-laurea/ciclo-xl/biotechnology-and-smart-practices-sustainable-management-natural-resources-food-and-agriculture>

**SCHOLARSHIPS**

n. 1 SCHOLARSHIP granted by

**DM 630/2024 PNRR** co-funded by **NEXTOME Srl**

**Topic:** Validation and application of Deep Neural Networks to improve sustainable agriculture

n. 1 SCHOLARSHIP granted by

**DM 630/2024 PNRR** co-funded by da **Orogel Soc. Coop. Agr.**

**Topic:** Strategies for the Sustainable Management of Spinach White Rust

n. 1 SCHOLARSHIP granted by

**DM 630/2024 PNRR** co-funded by **INNOVA SRL**

**Topic:** : Title: Improving the quality and sustainability of food manufacturing using robotic applications.

n. 1 SCHOLARSHIP granted by

**DM 630/2024 PNRR** co-funded by **Fruit Control Equipment Srl**

**Topic:** Applications of non-destructive techniques for monitoring fruit quality during cold storage in controlled atmosphere

**ADMISSION PREREQUISITES**

Master's Degree in:

LM-3 Landscape architecture

LM-6 Biology

LM-7 Agricultural biotechnologies

LM-8 Industrial biotechnology

LM-9 Medical, veterinary and pharmaceutical biotechnologies

LM-17 Physics

LM-18 Computer science

LM-21 Biomedical engineering

LM-22 Chemical engineering

LM-23 Civil engineering  
LM-24 Construction engineering  
LM-25 Automation engineering  
LM-26 Safety engineering  
LM-27 Telecommunications engineering  
LM-28 Electrical engineering  
LM-29 Electronic engineering  
LM-30 Energy and nuclear engineering  
LM-31 Industrial engineering  
LM-32 Computer engineering  
LM-33 Mechanical engineering  
LM-35 Environment and territory engineering  
LM-41 Medicine and surgery  
LM-42 Veterinary medicine  
LM-48 Urban and environmental development planning  
LM-52 International relations  
LM-53 Science and engineering of materials  
LM-54 Chemical Sciences  
LM-56 Economic Sciences  
LM-59 Sciences of public communication, business and advertising  
LM-60 Natural sciences  
LM-61 Human Nutrition Sciences  
LM-69 Agricultural sciences and technologies  
LM-70 Food science and technology  
LM-71 Sciences and technologies of industrial chemistry  
LM-73 Forestry and environmental sciences and technologies  
LM-74 Geological sciences and technologies  
LM-75 Sciences and technologies for the environment and the territory  
LM-77 Economics and business sciences  
LM-79 Geophysical Sciences  
LM-82 Statistical Sciences  
LM-83 Statistical, actuarial and financial sciences  
LM-86 Zootechnical sciences and animal technologies  
LM / GASTR Economic and social sciences of gastronomy  
LM Sc. Mat. Materials sciences  
LM-53. Materials engineering  
6 / S (Master of biology)  
7 / S (Master of agricultural biotechnology)  
8 / S (Master of industrial biotechnology)  
9 / S (Master of medical, veterinary and pharmaceutical biotechnologies)  
19 / S (Master of finance)  
20 / S (Master of physics)  
23 / S (Master of computer science)  
26 / S (Master of biomedical engineering)  
27 / S (Master of chemical engineering)  
29 / S (Master of automation engineering)  
30 / S (Master of telecommunications engineering)

- 31 / S (Master of electrical engineering)
- 34 / S (Master of industrial engineering)
- 35 / S (Master of computer engineering)
- 36 / S (Master of mechanical engineering)
- 38 / S (Master of environment and territory engineering)
- 46 / S (Master of medicine and surgery)
- 47 / S (Master of veterinary medicine)
- 50 / S (Master of mathematical-physical modeling for engineering)
- 54 / S (Master of urban and environmental development planning)
- 59 / S (Master of advertising and corporate communication)
- 61 / S (Master of materials science and engineering)
- 62 / S (Master of chemical sciences)
- 64 / S (Master of Economics)
- 68 / S (Master of natural sciences)
- 69 / S (Master of human nutrition sciences)
- 77 / S (Master of agricultural sciences and technologies)
- 78 / S (Master of agri-food sciences and technologies)
- 79 / S (Master of agri-zootechnical sciences and technologies)
- 81 / S (Master of sciences and technologies of industrial chemistry)
- 82 / S (Master of sciences and technologies for the environment and the territory)
- 83 / S (Master of economic sciences for the environment and culture)
- 84 / S (Master of economics-business sciences)
- 85 / S (Master of geophysical sciences)
- 86 / S (Master of geological sciences)
- 90 / S (Master of demographic and social statistics)
- 91 / S (Master of economic, financial and actuarial statistics)

## ADMISSION PROCEDURES

The selection will be based on the assessment of qualifications, research project and oral exam.

The assessment will take place pursuant to art. no. 6 and 7 of the Call.  
Foreign candidates can choose to take the admission test in English.

**Qualifications titles should be listed as follows:**

**Degree and final grade:**                      admission degree and final grade

*With regards to this qualification, if candidates hold a foreign degree the examination board has the right to amend or exclude this qualification in favour of the following ones*

**Degrees and academic qualifications:**

- Additional degrees over the admission criteria
- PhD
- Postgraduate and Master's degree
- Postgraduate specialization courses
- Specialization diplomas

**Research activity:**

at qualified Italian and foreign institutes relevant to the contents covered throughout the doctoral course applied for.  
Participation in European projects.

*Please indicate the type of position, duration and institute*

*Please provide project, duration and role details*

**Scientific publications and patents:**

Journal publications on SCOPUS  
Patents  
Publications not present on SCOPUS  
Book Chapter  
Conference proceedings  
Abstracts/posters presented at conferences

*- Please provide reason, qualification and date of the award/s.*

**Awards:**

**Oral exam**

During the oral exam, the research project presented by the candidate at the time of the application will also be discussed and the knowledge of the English language will be ascertained. It will be up to the candidate to take the exam in English.

**ADMISSION TEST CALENDAR AND VENUE**

The admission test for the PhD course will be online.

The date will be published on the University website

<https://www.unifg.it/en/studiare/corsi-post-laurea/ciclo-xl/biotechnology-and-smart-practices-sustainable-management-natural-resources-food-and-agriculture>

**Other useful information**

For all useful information, please consult the University website at

<https://www.unifg.it/en/studiare/corsi-post-laurea/ciclo-xl/biotechnology-and-smart-practices-sustainable-management-natural-resources-food-and-agriculture>

**Useful contacts**

**Educational/scientific contact person**

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