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PIANO NAZIONALE DI RIPRESA E RESILIENZA

ANNEX C

PhD COURSE IN BIOTECHNOLOGY AND SMART PRACTICES FOR A SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES, 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

Length:

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: <div> 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 </div>	

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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