COURSE DETAILS

" POULTRY AND FISH "

DEGREE PROGRAMME: PRECISION LIVESTOCK FARMING

ACADEMIC YEAR 2025-2026

GENERAL INFORMATION – TEACHER REFERENCES

TEACHER: ADDEO NICOLA FRANCESCO

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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: AUTOMATED FARM MANAGEMENT

MODULE: POULTRY AND FISH

SSD OF THE MODULE: AGRI-09/D

TEACHING LANGUAGE: ENGLISH

CHANNEL: https://www.docenti.unina.it/nicolafrancesco.addeo

YEAR OF THE DEGREE PROGRAMME: II

SEMESTER: I

CFU: 6

REQUIRED PRELIMINARY COURSES (IF MENTIONED IN THE COURSE STRUCTURE "REGOLAMENTO")

None.

PREREQUISITES (IF APPLICABLE)

Students are expected to possess a basic knowledge of poultry and fish production.

LEARNING GOALS

The course aims to provide students with advanced knowledge and a critical understanding of the latest innovations, technologies, and sustainable practices in poultry and fish production. Specifically, it seeks to develop the ability to independently and comprehensively analyze and evaluate scientific and technological advancements related to genetic selection, nutritional strategies, animal welfare standards, environmental sustainability, and digital applications. These competencies are intended to prepare professionals capable of making informed contributions within the poultry and aquaculture sectors, supporting innovation and the ecological transition of production systems.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

The student is expected to demonstrate specialized knowledge and an in-depth understanding of innovative and sustainable techniques applied to poultry and fish production, with particular emphasis on precision farming. Additionally, the student should be able to critically describe and analyze the physiological, nutritional, and managerial principles of poultry and fish farming, recognizing the main biological and environmental parameters that influence productivity and animal welfare. The educational pathway aims to develop the ability to independently and interdisciplinarity integrate the acquired knowledge, in order to understand the technical-scientific and environmental implications of modern production practices.

Applying knowledge and understanding

The student is expected to demonstrate the ability to competently and critically apply the knowledge acquired in the fields of animal husbandry and aquaculture, making use of advanced technological tools and automated management systems. They should be capable of implementing biotechnological and digital solutions for the sustainable management of both intensive and extensive production systems. Furthermore, the student must exhibit a proficient command of technical terminology to effectively communicate complex concepts. The educational path is designed to foster the capacity for critical analysis of real-world production challenges and to develop proposals for improvement, including in non-conventional operational contexts.

COURSE CONTENT/SYLLABUS

FRONTAL LESSONS	HOURS
Introduction to the course	**1**
Poultry	
In Ovo technologies (vaccination, sexing, nutrition)	**3**
Precision farming of broilers	**3**
Precision farming of laying hens	**3**
Precision farming of reproductive strains	**3**
Precision poultry nutrition	**3**
Automated techniques for monitoring the welfare of broilers and laying hens	**3**
Aquaculture	
Fish vaccination	**3**
Precision fish farming	**4**
Biosensor for assessment of fish health	**3**
Automated biomass monitoring	**2**
Robotics in fish farms	**3**
Aquaponic	**2**
TOTAL	**36**

PRACTICAL TEACHING	HOURS
Practical lab activities	**10**
On farm visits	**14**
TOTAL	**24**

READINGS/BIBLIOGRAPHY

Didactic materials provided by the instructor during the course, updated annually (https://www.docenti.unina.it).

TEACHING METHODS

The instructor will employ the following teaching methods:

a) Lectures, accounting for approximately 60% of the total course hours, aimed at introducing and systematizing the core theoretical concepts.

b) Practical exercises and technical field visits, representing around 40% of the course hours, designed to reinforce and apply the concepts discussed during lectures through hands-on experience.

The teacher will use a student-centered method; tutorials; Practical lessons, learning by doing method. The lessons will be supported by multimedia teaching material available to students on the teacher's website, after registering for the course

EXAMINATION/EVALUATION CRITERIA

a) Exam type:

Exam type	
written and oral	
only written	
only oral	X
project discussion	
other	

b) Evaluation pattern:

The oral examination for the integrated course *Automated Farm Management*, comprising the modules *Large Animal* and *Poultry and Fish*, consists of an interview structured around a minimum of four questions, equally distributed between the two modules (two questions per module). The final grade will be determined through a weighted average based on the number of University Educational Credits (CFU) allocated to each module, as follows: *Large Animal* module (10 CFU) accounting for 62.5% and *Poultry and Fish* module (6 CFU) accounting for 37.5%.

For the evaluation, the "**Regulation for Guidelines_for_exams_management**" approved by the Didactic Coordination Committee of the Master Degree in Precision Livestock Farming will be considered.