COURSE DATA

DATA SUBJECT

Code: 43243
Name: Pests: the control of the harmful overpopulations
Cycle: Master's Degree
ECTS Credits: 3
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
2148 - Master's degree in Biodiversity: Conservation and Evolution	Facultat de Ciències Biològiques	1	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2148 - Master's degree in Biodiversity: Conservation and Evolution	Biodiversity and conservation of invertebrates	ELECTIVES

COORDINATION

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FERRER SUAY MARIA DEL MAR

SUMMARY

"Pests: The Control of Harmful Super-populations" is part of the core subjects of the university master's degree in Biodiversity: Conservation and Evolution. This subject deals with the concept of plague and new trends in population control. It also reviews the characteristics and peculiarities of animal populations, mainly insects, which constitute agricultural, forest, stored pests, and of interest in environmental health. Its study load is 3 credits. The activities contemplated are: theoretical sessions in the classroom, practical sessions in the laboratory, and a field trip (provided that the budgeted economic availability allows it).

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

None.

COMPETENCES / LEARNING OUTCOMES

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Awaken interest in the social and economic application of science.

Be able to access the information required (databases, scientific articles, etc.) and to interpret and use it sensibly.

Be able to access to information tools in other areas of knowledge and use them properly.

Be able to communicate and disseminate scientific ideas.

Be able to make quick and effective decisions in professional or research practice.

Encourage ethical commitment and environmental awareness.

Favour intellectual curiosity and encourage responsibility for one's own learning.

Stimulate the capacity for critical reasoning and for argumentation based on rational criteria.

Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.

Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.

Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.

Students should demonstrate self-directed learning skills for continued academic growth.

Students should possess and understand foundational knowledge that enables original thinking and research in the field.

To be able to assess the need to complete the scientific, historical, language, informatics, literature, ethics, social and human background in general, attending conferences, courses or doing complementary activities, self-assessing the contribution of these activities towards a comprehensive development.

DESCRIPTION OF CONTENTS

1. Introduction to animal pests

Pest and control concepts. Triggering factors for the plague phenomenon. Economic thresholds. Types of pests. Types of control.

2. Agricultural pests

Incidence of agricultural pests in the world economy. Triggering factors for its appearance. Main harmful species. Control of populations through natural enemies.

3. Forest pests

The siege of drillers and defoliators. Triggering factors for its appearance. Main harmful species. Control of populations through natural enemies.

4. Urban pests

The problem of food hygiene and environmental health. Main harmful species. Solutions to the problems of the conservation of buildings, food and disease vectors.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	12,00
Laboratory	18,00
Total hours	**30,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	45,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**45,00**

TEACHING METHODOLOGY

Each thematic unit includes theoretical-practical teaching and learning activities.

Each unit consists of face-to-face sessions in theoretical, master-participatory classes, lasting 1 hour or 1 ½ depending on the needs of the teaching organization. In addition, there are face-to-face sessions in the practical laboratory, lasting 2 hours, where students work preferably in pairs, which complement and strengthen the fundamental knowledge of the thematic unit. The total hours in these sessions are 30, of

which 12 are theoretical and 18 are practical.

Note: Provided that the budgeted economic availability in each academic year allows it, a field trip would take place that would take 6 hours. If that were the case, these hours would be deducted from those corresponding to the laboratory practices, so the latter would then add up to a total of 14 hours.

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EVALUATION

The evaluation of the course will be carried out as follows:

- Theoretical exam type test that will account for 50% of the final grade of the course.

- Practical visu exam, which will account for 40% of the final grade of the course.

- A theoretical seminar, which will account for 10% of the final grade of the course.

REFERENCES

- Se pondrán a disposición del alumnado todas aquellas fuentes bibliográficas que, en el momento de la impartición de la materia ofertada, estén actualizadas y se adecúen a su formación.

- Es posarà a disposició de lalumnat totes aquelles fonts bibliogràfiques que, en el moment de la impartició de la matèria ofertada, estiguen actualitzades i se adeqüen a la seua formació.

- All those bibliographic sources that, at the time of teaching the subject offered, are up-to-date and appropriate to their training, will be made available to students.