

SYLLABUS

1. COURSE DESCRIPTION

Degree:	Environmental Sciences
Course:	Conservation Genetics
Module:	Complementary Training (Optional): Conservation
Department:	Molecular Biology and Biochemical Engineering
Academic Year:	2017-18
Term:	First
ECTS credits:	6
Year:	4th year
Type:	Optional
Language:	Spanish

Course Model:	B1	
a. Basic learning (EB):		60%
b. Practical learning (EPD):		40%

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2. LECTURER

2.1. Coordinator: Wilhelmus (Pim) Edelaar

2.2. Lecturer

Name:	Wilhelmus (Pim) Edelaar
School:	Environmental Sciences
Department:	Molecular Biology and Biochemical Engineering
Area:	Genetics
Office Hours:	Mondays 12.30-14.30, Tuesdays 16.30-18.30, Fridays 14.30-18.30
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3. TOPICS

BASIC LEARNING (EB):

Topic 1. Introduction to the Genetics of Conservation.

Topic 2. Detection and analysis of genetic variation: molecular markers.

Topic 3. Gender and identity.

Topic 4. Paternity and kinship.

Topic 5. Genetic diversity.

Topic 6. Population structure and gene flow.

Topic 7. Phylogeny.

Topic 8. Phylogeography.

Topic 9 D species elimination and hybridization.

Topic 10 Main management measures for the conservation of threatened species.

PRACTICAL AND DEVELOPMENT TEACHINGS

A) Cabinet Practices:

Practice 1. Problem session: types of markers, alleles versus loci versus genotypes, inheritance patterns, allele transmission (3 hours).

Practice 2. Computer practice: Modelling the dynamics of the alleles in the populations (3 hours).

Practice 3. Problem session: genetic drift, effective sizes and selection (3 hours).

Practice 4. Problem session: interpretation of phylogenetic trees (3 hours).

B) Field trip: Excursion to the captive breeding center of the Iberian lynx (El Acebuche, Doñana National Park). (6 hours, at the end of the subject).