

**1. General information****Course:** RESEARCH METHODS IN ECOLOGY OF GAME SPECIES**Code:** 310059**Type:** ELECTIVE**ECTS credits:** 4.5**Degree:** 2310 - MASTERS DEGREE PROGRAMME IN BASIC AND APPLIED
RESEARCH IN HUNTING RESOURCES**Academic year:** 2023-24**Center:** 601 - E.T.S. AGRICULTURAL ENGINEERS AND MOUNTS AB**Group(s):** 20**Year:** 1**Duration:** C2**Main language:** Spanish**Second language:****Use of additional
languages:****English Friendly:** N**Web site:****Bilingual:** N**Lecturer:** OLGA GARCÍA ÁLVAREZ - Group(s): 20

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2. Pre-Requisites

Not established

3. Justification in the curriculum, relation to other subjects and to the profession

Not established

4. Degree competences achieved in this course**Course competences**

Code	Description
E01	
E02	
E03	
E04	
E05	
E06	
E07	
E08	
G01	
G02	
G03	
G04	
G05	
G06	
G08	
G09	
G10	

5. Objectives or Learning Outcomes**Course learning outcomes**

Description

Additional outcomes**6. Units / Contents****Unit 1:**

Unit 1.1

Unit 1.2

Unit 1.3

Unit 1.4

Unit 1.5

Unit 2:

Unit 2.1

Unit 2.2
Unit 3:
Unit 3.1
Unit 3.2
Unit 3.3
Unit 4:
Unit 4.1
Unit 4.2

7. Activities, Units/Modules and Methodology							
Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Lectures	E01 G01	0.28	7	Y	N	
Class Attendance (practical) [ON-SITE]	Case Studies	E01 E03 E04 G01 G03	0.6	15	Y	N	
Problem solving and/or case studies [ON-SITE]	Group Work	E01 E02 E04 E05 E06 E07 E08 G01	0.7	17.5	Y	Y	
Study and Exam Preparation [OFF-SITE]	Self-study	G02 G04 G05 G06 G08 G09 G10	2	50	Y	Y	
Writing of reports or projects [OFF-SITE]	Project/Problem Based Learning (PBL)	E06 G02 G08	0.7	17.5	Y	Y	
Project or Topic Presentations [ON-SITE]	Cooperative / Collaborative Learning	E01 E02 E04 E06 E07 E08 G01 G02 G03 G06 G08	0.2	5	Y	Y	
Total:			4.48	112			
Total credits of in-class work: 1.78			Total class time hours: 44.5				
Total credits of out of class work: 2.7			Total hours of out of class work: 67.5				

As: Assessable training activity

Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System			
Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Assessment of active participation	30.00%	0.00%	
Self Evaluation and Co-evaluation	40.00%	40.00%	
Final test	30.00%	60.00%	
Total:	100.00%	100.00%	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject, an ordinary and an extraordinary one (evaluating 100% of the competences).

9. Assignments, course calendar and important dates	
Not related to the syllabus/contents	
Hours	hours
Unit 1 (de 4):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1.75
Class Attendance (practical) [PRESENCIAL][Case Studies]	3.75
Problem solving and/or case studies [PRESENCIAL][Group Work]	4.38
Study and Exam Preparation [AUTÓNOMA][Self-study]	12.5
Writing of reports or projects [AUTÓNOMA][Project/Problem Based Learning (PBL)]	4.38
Project or Topic Presentations [PRESENCIAL][Cooperative / Collaborative Learning]	1.25
Unit 2 (de 4):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1.75
Class Attendance (practical) [PRESENCIAL][Case Studies]	3.75
Problem solving and/or case studies [PRESENCIAL][Group Work]	4.38
Study and Exam Preparation [AUTÓNOMA][Self-study]	12.5
Writing of reports or projects [AUTÓNOMA][Project/Problem Based Learning (PBL)]	4.38
Project or Topic Presentations [PRESENCIAL][Cooperative / Collaborative Learning]	1.25
Unit 3 (de 4):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1.75
Class Attendance (practical) [PRESENCIAL][Case Studies]	3.75
Problem solving and/or case studies [PRESENCIAL][Group Work]	4.38
Study and Exam Preparation [AUTÓNOMA][Self-study]	12.5
Writing of reports or projects [AUTÓNOMA][Project/Problem Based Learning (PBL)]	4.38

Project or Topic Presentations [PRESENCIAL][Cooperative / Collaborative Learning]	1.25
Unit 4 (de 4):	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	1.75
Class Attendance (practical) [PRESENCIAL][Case Studies]	3.75
Problem solving and/or case studies [PRESENCIAL][Group Work]	4.38
Study and Exam Preparation [AUTÓNOMA][Self-study]	12.5
Writing of reports or projects [AUTÓNOMA][Project/Problem Based Learning (PBL)]	4.38
Project or Topic Presentations [PRESENCIAL][Cooperative / Collaborative Learning]	1.25
Global activity	
Activities	hours
Class Attendance (theory) [PRESENCIAL][Lectures]	7
Class Attendance (practical) [PRESENCIAL][Case Studies]	15
Problem solving and/or case studies [PRESENCIAL][Group Work]	17.52
Study and Exam Preparation [AUTÓNOMA][Self-study]	50
Writing of reports or projects [AUTÓNOMA][Project/Problem Based Learning (PBL)]	17.52
Project or Topic Presentations [PRESENCIAL][Cooperative / Collaborative Learning]	5
Total horas: 112.04	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Millsbaugh, J.J. y Marzluff, J.M.	Radio tracking and animal populations	Academic Press			2001	
Kernohan, B., R. Gitzen & J. Millsbaugh,	Analysis of Animal Space Use and Movements				2001	
Laver, P. N. and Kelly, M. J.	A Critical Review of Home Range Studies				2009	
Gutiérrez R. J. , Kevin A. Wood , Stephen M. Redpath , and Juliette C. Young	Conservation Conflicts: Future Research Challenges	Springer			2016	
Redpath Steve M. , Juliette Young, Anna Evely, William M. Adams, William J. Sutherland, Andrew Whitehouse, Arjun Amar, Robert A. Lambert, John D.C. Linnell, Allan Watt, and R.J. Gutiérrez	Understanding and managing conservation conflicts				2013	
Monterroso, P., Díaz-Ruiz, F., Lukacs, P.M., Alves, P.C., Ferreras, P.	Ecological traits and the spatial structure of competitive coexistence among carnivores				2020	
Mateo Moriones A., R. Villafuerte & P. Ferreras	red-legged partridge (Alectoris rufa) survival? An experimental study in Northern Spain				2012	
Ferreras, P., Díaz-Ruiz, F., Alves, P. C., & Monterroso, P.	Optimizing cameratrapping protocols for characterizing mesocarnivore communities in southwestern Europe				2017	
O'Connell, A. F., Nichols, J. D. & Karanth, K. U.	Camera Traps in Animal Ecology: Methods and Analyses	Springer-Verlag			2010	
Symonds, M. and A. Moussalli.	A brief guide to model selection, multimodel inference and model averaging in behavioural ecology using Akaike's information criterion				2011	
Doney Ethan D. , Jerry J. Vaske, Alistair J. Bath, Monica T. Engel, Bethany Downer	Predicting acceptance of lethal management of wood bison in Alaska, USA				2020	
MacKenzie, D. I., J. D. Nichols, G. B. Lachman, S. Droege, J. A. Royle, and C. A. Langtimm.	Estimating site occupancy rates when detection probabilities are less than one				2002	
Jimenez, J., Chandler, R., Tobajas, J., Descalzo, E., Mateo, R., Ferreras, P.	Generalized spatial mark-resight models with incomplete identification: An application to red fox density estimates				2019	
Meek, P., Fleming, P., Ballard, G., Banks, P., Claridge, A., Sanderson, J., and Swann, D.	Camera Trapping: Wildlife Management and Research	CSIRO Publishing			2014	
Long, R. A., MacKay, P., Zielinski, W. J. & Ray, J. C.	Noninvasive Survey Methods for Carnivores	Island Press			2008	
Maunder M.N.	Population Viability Analysis, based on combining integrated, Bayesian, and hierarchical analyses				2004	
Ferreras, P., Díaz-Ruiz, F.,	Improving mesocarnivore					

Monterroso, P.	detectability with lures in camera-trapping studies		2018
Gula, R. and Theuerkauf, J.	The need for standardization in wildlife science: home range estimators as an example		2013
Rovero, F. and Zimmermann, F.	Camera Trapping for Wildlife Research	Pelagic Publishing	2016
Beissinger, S.R. & McCullough, D.R.	Population Viability Analysis	University of Chicago Press	2002
Delibes-Mateos Miguel, Silvia Díaz-Fernández, Pablo Ferreras, Javier Viñuela and Beatriz Arroyo	The Role of Economic and Social Factors Driving Predator Control in Small-Game Estates in Central Spain		2013
Dickman A. J.	Complexities of conflict: the importance of considering social factors for effectively resolving human-wildlife conflict		2010
McCallum, J.	Changing use of camera traps in mammalian field research: habitats, taxa and study types		2013
Ridout, M. S. & Linkie, M.	Estimating Overlap of Daily Activity Patterns From Camera Trap Data		2009
Kenward, R. E.	A manual for wildlife radio tagging	Academic Press	2001
Harris, S., Cresswell, W. J., Forde, P. G., Trewella, W. J., Woollard, T., and Wray, S.	Home-range analysis using radio-tracking data - a review of problems and techniques particularly as applied to the study of mammals		1990