

**Course Project /Syllabus**

Course	Forestry and Climate Change / Forestry and Global Change		
Subject area			
Module	Optional Module		
Degree	Degree in Forest Engineering and Natural Environment / International Semester		
Curriculum	449/903	Code	47135/75027
When taught	Second Semester	Type/Category	ELECTIVE
Level/Cycle	Bachelor Degree	Year	4º/International Semester
ECTS Credits	3 ECTS		
Language of instruction	English		
Lecturer/s in charge	Felipe Bravo Oviedo [Course responsable], Alis Askarieh and Eric Cudjoe		
Contact details (e-mail, telephone no....)	Prof. Dr. Felipe Bravo, felipe.bravo@uva.es Teléfono: 979-108424 / Building E (office 208) Curriculum vitae: https://portaldelaciencia.uva.es/investigadores/181874/detalle https://www.researchgate.net/profile/Felipe-Bravo-11 https://www.linkedin.com/in/felipebravooviedo/ and collaborators		
Tutorial hours	See at www.uva.es > Masteres > Título correspondiente > Tutorías		
Department	PRODUCCIÓN VEGETAL Y RECURSOS FORESTALES		
Fecha de revisión por el Comité de Título	June 24th, 2024		



1. Situation / Meaning of the Course

1.1 Context

This is a course on silvicultural methods applied under environmental change. Mitigation and adaptation to climate change effects are key in the forest management systems. During the course, students will insight on the basic aspects of the effects of climate change on forest systems and how to help mitigate its effects. In addition, the students' abilities will be strengthened to obtain, elaborate, criticize and communicate scientific ideas to specialized and non-specialized audiences.

1.2 Relation with other courses

The course is related with general forestry courses.

1.3 Pre requirements

None but English proficiency is assumed

2. Skills

2.1 General

The General competences (G1 to G27) will be addressed on a global basis, and, particularly, efforts will be made to the compliance of:

G3 Be able to analyze and synthesize.

G4 To be capable of organizing and of planning.

G5 Be able to communicate effectively, orally and in writing, with both internal audiences.

G15 To show critical reasoning.

2.2 Specific

Students who successfully complete this course will be able to:

- Explain or describe in their own words the basic elements of global and climate change on forests and forestry
- Understand the basic of carbon sink calculations
- Be ready to go in depth on advance topics in adaptation and mitigation forestry.

3. Objectives

Ability to design, direct and apply silvicultural treatments to mitigate climate change and silvicultural treatments adapted to changing environmental situations.

4. Parts

Block 1:



a. Context

See course context

b. Learning aims

See course objectives

c. Contents

Climate change: variations of climate and human impact on climate. Protocols and agreements at regional, national, and international level. The Kyoto Protocol and its extensions. Forest systems and carbon flows. Impacts of climate change on forests and forestry. Quantification of carbon stored in forests. Adaptation to climate change through forest management. Mitigation of climate change through forest management. Forest Projects for Clean Development Mechanisms (CDM) and Reducing Emissions from Deforestation and Reduced Degradation (REDD +).

d. Teaching methods

A combination of lectures, students' active discussion and personal project are used in this course. Students will be encouraged to share thoughts and opinions. Participation and interaction with other will be required.

e. Workplan

Classes will take place during the second quarter according with published schedule. Classroom will be determined yearly. Depending on the year, invited speakers could deliver invited seminars.

f. Evaluation

See below.

g Teaching material

g.1 Basic bibliography

- BRAVO, F., LEMAY, V., GADOW, K. VON, JANDL, R. (Eds) 2017. Managing Forest Ecosystems: The Challenge of Climate Change. Springer. 2nd Edition
- Robinson, A.P, Hamman J.D. 2011. Forest Analytics with R: An Introduction. Springer

g.2 Further reading

g.3 Other telematic resources (knowledge pills, blogs, videos, digital magazines, mass courses (MOOC), ...)

Lecture powerpoints will be posted on the e-campus (UVa campus virtual)
Additional readings and resources will be delivered to the students through the e-campus (UVa campus virtual)

h. Necessary resources

No special resources

i. Timing

THEMATIC BLOCK	ECTS LOAD	EXPECTED PERIOD OF TIME
ONE	3	2 nd Quarter

5. Teaching methods and methodological principles

Lectures, labs, writing assessment and on field discussions.

6. Table of student dedication to the subject

In Class	Hours	Outside Class	Hours
Lectures	10	Preparation for assessment	30
Labs	10	Preparation of writing assignment.	15
Oral Presentations	2,5	Preparation of oral presentation	7,5
Total in class	22,5	Total outside class	52,5

7. Evaluation system

INSTRUMENTO/PROCEDIMIENTO (Tipo de actividades realizadas y evaluables)	PESO EN LA NOTA FINAL	OBSERVACIONES (se recomienda que ninguna parte evaluable supere el 40% en el 2º cuatrimestre)
Active participation	10 %	
Assignments on Campus Virtual		
Activity dossier (Intermediate report)	10 %	Delivered on due date
Class Project (Project Desing Document)	20 %	Delivered on due date
Class Project (Biomass)	20 %	Delivered on due date
Exam	40 %	.

Course Policies

- **Attendance:** Lectures form a core component of this course. Students must ensure that they are available to attend lectures and arrive with punctuality. They should pay close attention to the class schedule and read the material prior to class. They are welcome to share new ideas during class and are encouraged to read related papers.
- **Technology in the classroom:** No cellphones are allowed. Please, turn-off your cell phone prior to the start of class. You will be asked to leave the course for the day if you are using your phone.
- **Policy on Academic Ethics and Honesty:** The University of Valladolid (UVa) regards cheating as a serious academic offence. Anyone caught cheating will automatically receive a 0/10 for the quiz/exam/assignment and will be reported to the dean. Your responsibility, besides maintaining a high standard of personal honesty, includes taking precautions to prevent others from copying your work. A student's assessed work may be reviewed against electronic source material using computerised detection mechanisms.

8. Final comments

In case a student fails in the first call of the academic year in second call the written exam will stand alone for grading.