UniversidadeVigo

Subject Guide 2023 / 2024

<i>*</i>			Jubj	
IDENTIFYIN	G DATA			
Global char	nge			
Subject	Global change			
Code	V02M1/9V01218			
Study	Master			
programme	Universitario en			
	Biodiversidad			
	Terrestre:			
	gestión			
Descriptors	FCTS Credits	Choose	Year	Quadmester
<u></u>	3	Optional	1st	2nd
Teaching	Spanish			
language	English			
Department	<u> </u>			
Coordinator	Iglesias Briones, Maria Jesús			
Lecturers	Iglesias Briones, Maria Jesús			
	Muñoz Sobrino, Castor			
	Rodeiro Iglesias, Javier			
E-mail	mbriones@uvigo.es			
Web				
description	experiencing a set of global environmental changes that derive from the exponential increase of the human population and, consequently, the rate of resource utilization. Human activities involve profound transformations in the use of the land, global biogeochemical cycles, the abundance and distribution of species, and the structure and functioning of ecosystems. In this course, students are expected to know the scales and components involved in global change, understand its main effects on terrestrial ecosystems, and become familiar with the main international programs that study this discipline.			
Training an	d Learning Results			
Code				
Expected re	esults from this subject			
Expected res	sults from this subject			Training and Learning Results
 Ability to id Ability to id Ability to id 	dentify the main components, natural and anthropogen dentify the effects and adaptations to climate changes dentify, evaluate and foresee the effects of environmer	ic, of global char Ital changes on b	nge iodiversity at all lev	/els
(species, hal Ability to u changes	bitats, ecosystems, landscape and social and economic nderstand, apply and develop methodologies to evaluate to evaluate the state of t	aspects) ate and mitigate	environmental	
Capacity to Action, Span	o correctly apply the international and national Directiv is here the international and national Directiv is here the second s	es and regulation	ns (IPCC, Climate	
 Ability to id Ability to e 	lentify the effects of climatic variables on the soil carbo valuate the contribution of soils to carbon sequestratio	on balance n		
Ability to d	evelop strategies to increase the carbon retention pote	ential by soils		
Contents				

Торіс	
Introduction to Global Change	Scales and components
General trends in Global Change	IPCC scenarios and International Protocols

Evidences of Global Change in Terrestrial Ecosystems	 Responsible factors for the observed biodiversity changes; extinctions and adaptations Climate change effects across different biomes Changes in atmospheric composition; biogeochemical changes; sources and sinks
Long-term perspectives	Global Change in the past
Practical activities	Analysis and interpretation of climate data and proxies Sustainable scalable methods of mitigation and adaptation

Planning				
	Class hours	Hours outside the classroom	Total hours	
Lecturing	14	28	42	
Case studies	5	4	9	
Seminars	1	0	1	
Essay	0	20	20	
Presentation	3	0	3	
*The information in the planning tab	le is for guidance only and does no	ot take into account the het	erogeneity of the students.	

Methodologies	
	Description
Lecturing	Lectures on the different topics
Case studies	The cases can refer to any of the components of the global change and require the critical analysis of recent literature and interpretation of data and proxies
Seminars	Answsering questions and solving problems
	Answering questions and solving problems

Personalized assistance			
Methodologies	Description		
Lecturing	Answering questions and solving any problems that might arise		
Tests	Description		
Essay	Solving any potential issues		

Assessment				
	Description	Qualification	Training and	
			Learning Results	
Lecturing	Attendance and active participation	30		
Essay	Document describing the main idea, the phases of the project, the parameter/s to	30		
	be mitigated and their measurement, the expected economic results and its			
	scalability			
Presentatio	nPublic defense and debating skills	40		

Other comments on the Evaluation

Sources of information

Basic Bibliography

Canadell, Josep G., Pataki, Diane E., Pitelka, Louis F. (Eds.), Terrestrial Ecosystems in a Changing World, Springer, 2007 **Complementary Bibliography**

IPCC, Global Warming of 1.5 °C, 2018

IPCC (2019), Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems,

Recommendations