

Teaching Guide					
	Identifying Data 2020/21				
Subject (*)	Introduction to Botany: General Botany Code 610G02023				
Study programme	Grao en Bioloxía				
		Desci	riptors		
Cycle	Period	Ye	ear	Туре	Credits
Graduate	1st four-month period	Fi	rst	Obligatory	6
Language	SpanishGalicianEnglish				
Teaching method	Hybrid				
Prerequisites					
Department	Bioloxía				
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Web				· · · · · · · · · · · · · · · · · · ·	
General description	Introduction to Botany, the science	ce which studie	s the different o	rganisms traditionally	ncluded under the label "plants". It
	integrates information from a wide variety of disciplines, including physiology, plant anatomy and histology, biochemistry,				
	genetics, ecology, etc. The students will acquire knowledge and skills useful for different professional activities, including				
	research, teaching, environmenta	al consultancy,	agronomy, ethn	obotany, etc.	
Contingency plan	1. Modifications to the contents				
	Only minor changes may be done	e.			
	2. Methodologies				
	*Teaching methodologies that are	e maintained			
	The general structure will be mai	ntained			
	*Teaching methodologies that are	e modified			
	Lab classes will be substituted by other remote activities				
	3. Mechanisms for personalized	attention to stud	dents		
	Available at email, teams, moodle or others				
	4. Modifications in the evaluation				
	No essential modifications except for the lab classes and herbarium, which will be changed by a quizzes or similar online				
	activities.				
	*Evaluation observations:				
	5. Modifications to the bibliograph	hy or webgraph	ıy		
	None				

	Study programme competences
Code	Study programme competences
A1	Recoñecer distintos niveis de organización nos sistemas vivos.
A2	Identificar organismos.
A4	Obter, manexar, conservar e observar especímenes.
A7	Reconstruír as relacións filogenéticas entre unidades operacionales e pór a proba hipóteses evolutivas.
A19	Analizar e interpretar o comportamento dous seres vivos.
A22	Describir, analizar, avaliar e planificar o medio físico.
A29	Impartir coñecementos de Bioloxía.
A30	Manexar adecuadamente instrumentación científica.
A31	Desenvolverse con seguridade nun laboratorio.



A32	Desenvolverse con seguridade no traballo de campo.
B1	Aprender a aprender.
B6	Organizar e planificar o traballo.
B8	Sintetizar a información.
B12	Adaptarse a novas situacións.

Learning outcomes			
Learning outcomes	Study	y progra	mme
		competences	
-Being able to critically manage relevant information from different bibliographic sources.		B1	
		B8	
- Encourage students to further learn and research about Botany, a basic discipline in Biology.		B6	
		B12	
- Understanding the different reproductive types and life cycles of the diverse organisms studied in Botany.	A19		
- Acquiring skills related to the observation, description and identification of fungi, algae and plants.	A1		
	A2		
	A4		
- Learning basic techniques of field- and laboratory work in Botany.	A22		
	A30		
	A31		
	A32		
- Understanding the evidences of the evolutionary relationships among the different fungi, algae and plants.	A7		
- Understanding the taxonomic organization and nomenclature of fungi, algae and plants.	A1		
	A2		
	A7		
- Understanding the morphological and taxonomical diversity of fungi, algae and plants.	A1		
	A2		
	A29		

	Contents
Торіс	Sub-topic
Teoría: Introduction and general characteristics	1 Plants and related organisms in the tree of life. Evolutinary relationships and
	phylogeny. Characteristics and main groups.
	2 Morphological organization of plants and related organisms. From talophyes to
	cormophytes.
	3 Reproduction. Alternation of nuclear phases and generations. Biological cycles.
	4 Systematics, nomenclature and taxonomy of plants and other related groups.
Teoría: Studied groups	5 Flowering plants. General characteristics and life cycle of seed plants.
	6 Morphology and floral biology of seed plants.
	7 Angiosperms (monocots and dicots) and gymnosperms.
	8 The non-flowering plants. General characteristics of embriophytes. Vascular
	embriophytes. General characteristics and life cycle of pteridophytes.
	9 Prevascular embriophytes. General characteristics and life cycle of bryophytes.
	10 Cyanobacteria and eukaryotic algae.
	11 Fungi and other heterotrophic organisms. Lichens and other symbiotic
	associations.
Teoría: Introduction to plant conservation and geobotany	12 Conservation of plant diversity. Threats and conservation strategies.
	13 Geobotany as integrative science. The floristic kingdoms and major plant
	formations of the Earth.



Seminars	1 Diagrams and floral formulas. Identification keys (2h).
	2 Seminar on vascular and prevascular plants (2h).
	3 Life cycles of algae and fungi (2h).
	4 Comparative studies of organisms (1h).
Lab sessions	1 Observation of terrestrial plants in their natural environment. Collection and
	preservation methods.
	2 Observation and description of dicotyledonous angiosperms.
	3 Observation and Description of monocot angiosperms.
	4 Observation and description of gymnosperms.
	5 Observation and description of pteridophytes.
	6 Observation and description of bryophytes.
	7 Observation and description of macroscopic algae.
	8 Observation and description of microscopic algae.
	9 Observation and description of fungi.
Case studies	1 Collection, identification and conservation of two dicotyledonous angiosperms.
	2 Collection, identification and conservation of two monocotyledonous angiosperms.
	3 Collection, identification and conservation of two gymnosperms.
	4 Collection, identification and conservation of ferns and moss.
	5 Collection, identification and conservation of two different macroalgae division.
	6 Collection, identification and preservation of higher fungi and lichen.

Planning				
Methodologies / tests Competencies Ordinary class Student?s personal		Total hours		
		hours	work hours	
Case study	A2 A4 A22 A32 B1 B6	1	22	23
	B8 B12			
Laboratory practice	A30 A31	18	9	27
Guest lecture / keynote speech	A1 A7 A19 A29 B1 B6	21	52.5	73.5
	B8 B12			
Seminar	A1 A7 B1	7	17.5	24.5
Personalized attention		2	0	2

(\*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

	Methodologies
Methodologies	Description
Case study	The student will collect, identify and handle properly preserved, a collection of 12 samples, including 4 angiosperms, 2
	gimnosperms, 1 fern, 1 bryophyte, 2 algae from different phyla, 1 fungi and 1 lichen.
Laboratory practice	The student will work with different kinds of living and preserved material, representative of the studied groups of the subject.
Guest lecture /	Lecturers will explain the main concepts of the subject. Slides will be uploaded.
keynote speech	
Seminar	Lecturers will invite the students to work on specific aspects of the studied groups, and discussion will follow in seminars.

	Personalized attention
Methodologies	Description
Seminar	Any personal queries will be addressed in personal meetings with the students
Laboratory practice	
Case study	
Guest lecture /	
keynote speech	



Assessment			
Methodologies	Competencies	Description	Qualification
Seminar	A1 A7 B1	Quality of interventions and demonstrated interest in the subject	20
Laboratory practice	A30 A31	short tests related to the lab sessions	20
Case study	A2 A4 A22 A32 B1 B6	Quality of the personal collection of organisms will be evaluated	20
	B8 B12		
Guest lecture /	A1 A7 A19 A29 B1 B6	Final exam with essay, short-answered and test questions	40
keynote speech	B8 B12		

Assessment comments

At least 70% of attendance. At least 4.5 over 10 in the final exam and seminars. At least 4 over 10 in the lab short tests and the case studies. The student will have two opportunities at june and july, no qualifications will be kept for forthcoming years.

"Not present" will be achieved only if the student has participated in less than 30% of the total activities.

For part time students and those with any disabilities, the attendance may be substituted by an essay proposed by the professor and evaluated in a personal meeting.

	Sources of information
Basic	Teoría:BARNES, C. (2001). Invitación a la Biología. PanamericanaDIAZ-GONZALEZ, T.E.; FERNÁNDEZ-CARVAJAL,
	M.C. & FERNÁNDEZ, J. A.(2004). Curso de Botánica. Ediciones Trea, Gijón.FONT I QUER, P. (1982). Iniciación a la
	Botánica. Editorial Fontalba.FONT I QUER (1987). Plantas medicinales. El Dioscórides renovado. Labor.FONT I
	QUER, P. (1993). Diccionario de Botánica. Labor, Barcelona.IZCO, J.; BARRENO, E.; BRUGUÉS, M.; COSTA M.;
	DEVESA, J.; FERNÁNDEZ, F.; GALLARDO, T.; LLIMONA, X; SALVO, E; TALAVERA, S. & VALDÉS, B. (2004).
	Botánica. McGraw-Hill, Madrid.NABORS, M.W. (2006). Introducción a la Botánica. Pearson.REECE, C. et al. (2008).
	Biology. Pearson International EditionSCAGEL, R.; BANDONI, R.J.; ROUSE, G.E.; SCHOFIELD, G.E.; STEIN, J.R. &
	TAYLOR, T.M. (1987). El Reino Vegetal. Omega, Barcelona.STRASBURGER, E., F. NOLL, H. SCHENCK & A.F.W.
	SCHIMPER. (2004). Tratado de Botánica (actualizado por P. SITTE et al.) Omega, Barcelona. Prácticas:
Complementary	

Recommendations		
Subjects that it is recommended to have taken before		
Subjects that are recommended to be taken simultaneously		
Subjects that continue the syllabus		
Plant Systematics: Cryptogamia/610G02024		
Plant Systematics: Phanerogamia/610G02025		
Botanical Geography: Geobotany/610G02026		
Other comments		
It is highly recommended that you take this course before any of other continuing subjects (mostly Botánica Sistemática: Criptogamia, Botánica		

Sistemática: Fanerogamia and Xeobotánica)

(\*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.