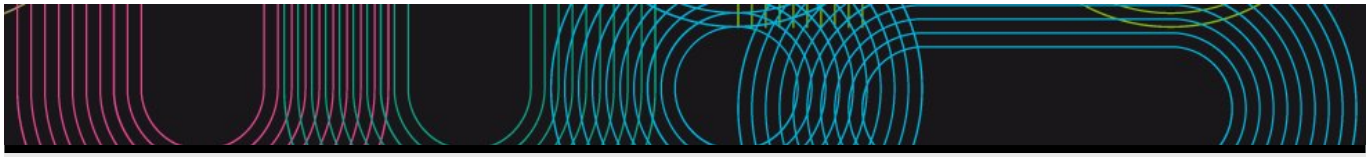

IDENTIFYING DATA				
Repopulation				
Subject	Repopulation			
Code	P03G370V01603			
Study programme	(*)Grao en Enxeñaría Forestal			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Optional	3rd	2nd
Teaching language	Spanish Galician			
Department				
Coordinator	González Prieto, Óscar			
Lecturers	González Prieto, Óscar Ortiz Torres, Luis			
E-mail	oscargprieto@uvigo.es			
Web				
General description	(*)Los objetivos generales de la asignatura son: a) Conocer las bases, objeto y fundamentos de las Repoblaciones Forestales b) Conocer las caractaristicas, métodos y medios necesarios para llevar a cabo las distintas opreaciones relacionadas con las repoblaciones forestales c) Conocer los principios generales de la obtención de semilla forestal y producción de planta forestal en vivero.			

Competencies	
Code	
B1	Ability to understand the biological, chemical, physical, mathematical and representation systems necessary for the development of professional activity, as well as to identify the different biotic and physical elements of the forest environment and renewable natural resources susceptible to protection, conservation and exploitations in the forest area.
B2	Ability to analyze the ecological structure and function of forest systems and resources, including landscapes.
C20	Ability to know, understand and use the principles of forestry machinery and mechanization.
C21	Ability to know, understand and use the principles of: reforestation. Gardening and nurseries. Forest improvement
D5	Capacity for information management, analysis and synthesis
D8	Ability to solve problems, critical reasoning and decision making
D10	Autonomous Learning

Learning outcomes	
Expected results from this subject	Training and Learning Results

2R. 2018 Knowledge and understanding of the disciplines of engineering of the his speciality, to the necessary level to purchase the rest of the competitions of the qualifications, including notions of the last advances.	B1 B2	C20 C21	D5 D8 D10

3R. 2018 Be conscious of the multidisciplinary context of the engineering.
4R. 2018 Capacity to #analyze products, processes and complex systems in the his field of study; choose and apply analytical methods, of calculation and experimental *relevantes of form *relevante and interpret correctly the results of these analyses.
5R. 2018 Capacity to identify, formulate and resolve problems of engineering in the his speciality; choose and apply analytical methods, of calculation and experiments properly established; Recognize the importance of the social restrictions, of health and security, environmental, economic and industrial.
6R. 2018 Capacity to project, design and develop complex products (pieces, component, products finished, etc.), processes and systems of the his speciality, that fulfil the requirements established, including the knowledge of the social aspects, of health and environmental security, economic and industrial; as well as select and apply methods of appropriate project.
7R. 2018 Capacity of the project using any knowledges advanced of the his speciality in engineering.
8R. 2018 Capacity to realize bibliographic researches, consult and use databases and other sources of information with discretion, to realize @simulación and analysis with the objective to realize investigations on technical subjects of the his speciality.
9R. 2018 Capacity to consult and apply codes of good practices and security of the his speciality.
11R. 2018 Understanding of the techniques and methods of analysis, project and applicable investigation and his limitations within the scope of the his speciality.
12R. 2018 practical Competition to resolve complex problems, realize complex projects of engineering and realize specific investigations stop his speciality.
13R. 2018 Knowledge of the application of materials, teams and tools, technological processes and of engineering and his limitations within the scope of the his speciality.
14R. 2018 Capacity to apply norms of engineering in the his speciality.
15R. 2018 Knowledge of the social implications, of health and security, environmental, economic and @industrial of the practice in engineering.
16R. 2018 general Ideas on economic questions, organisational and of management (how management of projects, management of risks and change) in the industrial and entrepreneurial context.
19R. 2018 Capacity to communicate of effective way information, ideas, problems and solutions in the field of the engineering and with the society in general.
20R. 2018 Capacity to work effectively in national and international contexts, individually and in team, and cooperate with the engineers and people of other disciplines.

Contents

Topic

Module I *Planificacion and *ejecucion of *repoblaciones forest	Subject 1. Concept and election of species Lesson 1.1. Concept of *repoblacion forest and comment Lesson 1.2. Antecedents and need of the *repoblacion forest Lesson 1.3. Aims of the *repoblacion forest Lesson 1.4. Election of species Fear 2. Methods of *repoblacion Lesson 2.1. Types of methods Lesson 2.2. Selection of the method Fear 3. Treatment of the pre-existing vegetation Lesson 3.1. Justification and objective Lesson 3.2. Classification of the procedures of *desbroce Lesson 3.3. Description of the procedures of *desbroce Subject 4. Preparation of the am used to Lesson 4.1. Justification and objective Lesson 4.2. Classification of the procedures of preparation of the am used to Lesson 4.3. Description of the procedures of preparation of the am used to Lesson 4.4. Hydrological appearances of the *desbroces and of the preparation of the floor Fear 5. Introduction of the new species Lesson 5.1. Density of introduction Lesson 5.2. You seed Lesson 5.3. Plantations Fear 6. Back cares of the *repoblaciones and complementary works Lesson 6.1. Back cares of the *repoblaciones Lesson 6.2. Complementary works Subject 7. Environmental impact of the *repoblaciones forest Lesson 7.1. Introduction and normative Lesson 7.2. Considerations on the environmental impact of the *R. Forest Lesson 7.3. Factors affected Lesson 7.4. Evaluation of impacts Lesson 7.5. Methodological conclusion
Module II Seeds	Subject 8. Generalities on forest seeds Lesson 8.1. *Recolección Lesson 8.2. Extraction and cleaning Lesson 8.3. Storage Lesson 8.4. Treatments of conservation Lesson 8.5. Analysis Lesson 8.6. Treatments of germination Lesson 8.7. It seeds
Module III Nurseries	Subject 9. Generalities on forest nurseries Lesson 9.1. Definition and classes Lesson 9.2. It waters Lesson 9.3. I am used to Lesson 9.4. Location, form and size Lesson 9.5. Crop of plant to nude root Lesson 9.6. Crop of plant in container Lesson 9.7. *Estaquillado Lesson 9.8. Quality of the forest plant Lesson 9.9. *Micorrizacion
Module IV Security, Hygiene and Prevention of labour Risks in the *repoblaciones forest	Element 10 *PRL in *Repoblaciones Forest *Leccion 10.1 Risks related with the spaces of work *Leccion 10.2 manual Tools *Leccion 10.3 portable Machines *Leccion 10.4 forest Machinery *Leccion 10.5 Manipulation of phytosanitary products and *fertilizantes

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	25.5	47.5	73

Problem solving	8	14	22
Studies excursion	8	8	16
Project based learning	1	11.5	12.5
Case studies	10.5	14	24.5
Objective questions exam	0.5	0	0.5
Problem and/or exercise solving	0.5	0	0.5
Laboratory practice	1	0	1

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

Methodologies	
	Description
Lecturing	The lesson *magistral is the common form of development of the function *expositiva, in that the professor develops a series of concepts related with the contents of the Subject, and the student adopts a paper *receptivo of said information. The employment of audiovisual means (slides, transparencies, videos, cannon of video, etc.) goes to be constant in these classes since the retention of information is very upper when they combine oral and visual stimuli. The lesson *magistral serves to develop conceptually a subject, give global versions, develop a methodology of work. Etc. In function of the advance of the course, the content of each didactic unit given will go facilitating previously and by writing, well as you aim or like bibliography, what makes possible to the student that assist to the classes with the previous reading of the subject. On the other hand, if the student knows that what gives will be able to find it in a book to the hour to study it, his attitude in class will be headed to to comprise the explanation, having to take only notice *marginales of what expands . In the case of the present subject, the employment of audiovisual means like digital presentations, multimedia, transparencies, *retroproyección, etc. has to speed up the exhibition of subjects with a marked descriptive character, or in which they require drawings and diagrams of complicated execution. The classes of discussion directed, will make at least one along the course and consists in the exhibition of a subject, that has to gather characteristics of real problem, wealth in contradictions or reasons of controversy, has to be of interest for the students, that have to know the activity with *antelación sufficient and be the quite qualified to issue opinions about the same. The technician orients to the *superación of the memorisation *acrítica, the promotion of the participation in the group and the *verbalización of ideas like half that favours his assimilation. Besides, it ascertains in an important part of the students a difficulty of expression and editorial, that can contribute to win by means of this didactic resource. The paper of the professor like driver or *moderador of the discussion is fundamental allowing all type of opinions on the subject. Besides, and of complementary form to the lesson *magistral, after the exhibition of controversial subjects or of special interest for the students, results interesting the organisation of debates of extension reduced, turns of questions, etc. Such activity, of realisation simpler that the previous, can consider more like a resource of preparation and control inside the lesson *magistral, that like a technician of extraneous nature to the same. Other tools that contribute to reinforce the included contents in the lessons *magistrales are. - Study of cases/analysis of situations /discussion directed: Formulation, analysis, resolution and debate of a problem or exercise related with the thematic of the subject. - Resolution of problems and/or exercises of autonomous form: Formulation, analysis, resolution and debate of a problem or exercise related with the thematic of the subject, by part of the students. - Presentations/exhibitions: oral Exhibition by part of the students of a concrete subject or of a work (generally previous presentation written). - Multimedia sessions: Employment of material *videográfico / on-line on appearances of the subject - Gone out of practical/study of field: Realisation of visits-exits to the field for the observation and study of appearances previously studied/analysed
Problem solving	Formulation, analysis, resolution and debate of a problem or exercise related with the thematic of the subject, by part of the students. Will carry out exercises and problems on subjects as, static study of forest masses, dynamic study of the forest masses, etc.

Studies excursion	The practice of the technicians, learnt theoretically, has to carry out in contact with the professional practice that only can obtain by means of the real practice of the technicians (or his direct observation) there where these carry out (industry, forest masses, etc.). Have to make the maximum number of practices of field or trips of practices, without which the theoretical educations result insufficient to achieve the educational aims. The practices of field pretend therefore achieve fix the concepts of the subject, give to the students the opportunity to put in contact with the professional world and boost the relations between students and professor student out of the centre. The realisation of trips of practices have felt when really they contribute new knowledges that they are impossible to purchase in the own School. The exit of field will not make in the case of teaching no face-to-face or *semi-face-to-face. In this case of *substituirá by the practical observation of audiovisual material of works and field of *repoblaciones forest.
Project based learning	- *Organizacvión Of seminars *ou specific conferences - Presentations/exhibitions: oral Exhibition by part of the students of a concrete subject or of a work (generally previous presentation written). - Multimedia sessions: Employment of material *videográfico / on-line on appearances of the subject - Days of study of appearances previously studied/analysed in the exits of field
Case studies	- Study of cases/analysis of situations or discussion directed: Formulation, analysis, resolution and debate of a problem or exercise related with the thematic of the subject.

Personalized assistance

Methodologies	Description
Case studies	The *tutorías will make preferably by telematic means (email, remotecampus, forums of doubts in *FaiTIC). For that student or student that request it will be able to make , inthe measure of the possible, *presencialmente. They will indicate to beginning of course the concrete forms ofcommunication as well as the schedules.
Problem solving	The *tutorías will make preferably by telematic means (email, remotecampus, forums of doubts in *FaiTIC). For that student or student that request it will be able to make , inthe measure of the possible, *presencialmente. They will indicate to beginning of course the concrete forms ofcommunication as well as the schedules.
Studies excursion	The *tutorías will make preferably by telematic means (email, remotecampus, forums of doubts in *FaiTIC). For that student or student that request it will be able to make , inthe measure of the possible, *presencialmente. They will indicate to beginning of course the concrete forms ofcommunication as well as the schedules.

Assessment

	Description	Qualification	Training and Learning Results
Lecturing	Proof written on the teaching given in sessions *magistrales	0	
Project based learning	Proof on learning based in projects	0	
Case studies	Proof written and/or oral on the similar cases to the resolved in class	30	C21
Objective questions exam	Proof written on the teaching given in sessions *magistrales	30	C21
Problem and/or exercise solving	Proof written on the teaching given in sessions *magistrales	40	C21

Other comments on the Evaluation

To approve the matter have to surpass the common examinations and make satisfactorily the works that *eventualmente commission . The presence in practise and trips is compulsory. They will not save classifications of the theoretical notes, further of the announcements regulated of the academic year.

Calendar of examinations:

official Dates collected in informative documentation of the School.&*nbsp;http://forestales.uvigo.es/gl/docencia/exames/

Sources of information

Basic Bibliography

Complementary Bibliography

R. Serrada, **SERRADA, R. 2000. Apuntes de Repoblaciones Forestales.**, FUCOVASA. Madrid.,

Recommendations

Subjects that are recommended to be taken simultaneously

Botany/P03G370V01303
Forestry Ecology/P03G370V01402

Subjects that it is recommended to have taken before

Biology: Plant Biology/P03G370V01201

Contingency plan

Description

=== EXCEPTIONAL MEASURES SCHEDULED ===
In front of the uncertain and unpredictable evolution of the sanitary alert caused by the *COVID-19, the University of Vigo establishes an extraordinary planning that will activate in the moment in that the administrations and the own institution determine it attending to criteria of security, health and responsibility, and guaranteeing the teaching in a no face-to-face stage or partially face-to-face. These already scheduled measures guarantee, in the moment that was prescriptive, the development of the teaching of a more agile and effective way when being known in advance (or with a wide *antelación) by the students and the *profesorado through the tool normalised and institutionalised of the educational guides.

* Educational methodologies that keep
introductory Activities
Lesson *magistral
Resolution of problems
Work *tutelado
* educational Methodologies that modify
The exit of practices scheduled will not make in the case of teaching no face-to-face or in the case that it do not allow with teaching *semi-face-to-face. *substituirá By practical observation of audiovisual material of processes of manufacture of industries of the wood (videos and digital information)
* Mechanism no face-to-face of attention to the students (*tutorías)
virtual Dispatch, email and habilitation of forums in the platform *FaiTIC
* Modifications (if they proceed) of the contents to give
The exit of practices scheduled will not make in the case of teaching no face-to-face or in the case that it do not allow with teaching *semi-face-to-face. *substituirá By practical observation of audiovisual material of processes of manufacture of industries of the wood (videos and digital information)
* additional Bibliography to facilitate the car-learning
is not necessary, since they facilitate it to him materials in the platform of *teledocencia, many of them of own preparation by part of the professors, to be able to make a follow-up of the matter
* Other modifications
is not necessary
=== ADAPTATION OF THE EVALUATION ===
* Test already made
keeps the weight when being adapted all the proofs to any circumstance
* Test slopes that keep
keeps the weight when being adapted all the proofs to any circumstance
* Test that they modify
is not necessary
* New proofs
is not necessary
* additional Information
does not require