

IDENTIFYING DATA				
Dasometry				
Subject	Dasometry			
Code	P03G370V01602			
Study programme	(*)Grao en Enxeñaría Forestal			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Mandatory	3rd	2nd
Teaching language	Spanish Galician			
Department				
Coordinator				
Lecturers				
E-mail				
Web				
General description	The *asignatura of *Dasometría consists of two big blocks: *Dasometría and Inventory. The first a forest basic science part of the *Dasonomía and very related with the *Selvicultura that centres in the study of the volumes and growths of the forest masses. The second is a group of technicians that allow to the technician in his professional work apply the sciences (*Dasometría) for *recopilar data on the masses and possible future evolution. In the education of the matter, three appearances are fundamental to develop, according to our point of view, in the education of the forest science: intuition, rigour and creation. The intuition situates to the student in the type of problems that wants to attack (through examples), creates a perspective (often through the own history of the problem) and in definite generates an interest. The second level formalises all these intuitions and undresses them of the accessory until *desentrañar the essential. The rigour needs of the abstraction and is fundamental in the transmission of technical knowledges. The creation allows to build own solutions, practical, what before have a forest contact and more learn of this, more motivated goes to continue the study of the *asignatura.			

Skills	
Code	
B6	Ability to measure, inventory and evaluate forest resources, apply and develop silvicultural techniques and management of all types of forest systems, parks and recreational areas, as well as techniques for harvesting timber and non-timber forest products
C24	Ability to know, understand and use the principles of: dasometry and forest inventory, forest management.
D8	Ability to solve problems, critical reasoning and decision making

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. 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. 22R. 2018 Capacity to be to the day of the scientific and technological news.	B6	C24	D8

Contents	
Topic	
0. Introduction to the Dasometry	1. Why measure? 2. Why measure trees and forest masses? 3. Dasometry and affine sciences. 4. Units of measure. 5. Normalisation of symbols used in dasometry. 6. Significant figures. 7. Precision, bias and accuracy of the data. 8. Errors. 9. Weight or volume? 10. Components of the tree. 11. The form of the tree. 12. Measurement by trip of fluid. 13. Differences between quantity, value and price.
1. Measurement of Trees: Diameters	1.1. Important terms. 1.2. Basic dasometric parameters. 1.3. Measurement of diameters of the trees. 1.4. Measurement of the thickness of bark, diametral growth and age of the tree. 1.5. Marked and designation of trees. 1.6. Measurement of distances.
2. Measurement of Trees: Heights	2.1. Measurement of slopes. 2.2. Measurement of heights. 2.3. Recommendations for the measurement of heights. 2.4. Relascopio Of Bitterlich. 2.5. Other devices of the inventory. 2.6. Price devices dasometrycs.
3. Cubiculation By trozas.	3.1. Cubiculation Of trees. 3.2. Types dendrométricos. 3.3. Procedures for cubages of trees. 3.4. Formulas for cubages by trozas. 3.5. Rules madereras.
4. Cubages Complete trunks.	4.1. Graphic method. 4.2. Function of profile. 4.3. Formula of Pressler or of the point guideline. 4.4. Cubages Of trees in foot. Pressler-Bitterlich. 4.5. Parameters related with form: coefficients of form and mórphics.. 4.6. Height reduced.

5. Cubiculation Of masses.	5.1. Stereometry. 5.2. Function of distribution diametric. 5.3. Half parameters of a mass. 5.4. Cubification Of forest masses. 5.5. Prices or tables of cubiculation. 5.6. Tables of mass. 5.7. Trees Type or modular values.
6. Wooden measurement stacked.	6.1. Quantification of the wood stacked. Definition of stereo. 6.2. Other units of apparent volume. 6.3. Coefficient of stacked. 6.4. Methods to calculate the coefficient of stacked.
7. Epidometry	7.1. Definition of epidometry 7.2. Diametral growth and age of the tree. 7.3. Analysis epidometric of trunks. 7.4. Definitions of growth. 7.5. Relation between growths. 7.6. Methods of obtaining of growths. 7.7. Definitions of growth of a mass.
8. Forest inventory	8.1. Definition of inventory. 8.2. Parts of the inventory. 8.3. Types of inventory. 8.4. Planning of the inventory. 8.5. Design of the inventory. 8.6. Units of sampling. 8.7. Methods of sampling. 8.8. Number, size and form of the plots of sampling. 8.9. Methods of realisation of the inventory. 8.10. Determination of the number of sample for a determinate error. 8.10. Estadillos Of taking of data in field.

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	26	52	78
Problem solving	4	10	14
Case studies	6	12	18
Studies excursion	14	21	35
Problem and/or exercise solving	1	0	1
Report of practices, practicum and external practices	1	0	1
Self-assessment	0	3	3

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

Methodologies

	Description
Lecturing	Exhibition by part of the professor of the contents on the matter supporting some presentations of images, diagrams and videos that the student can see/download in the web indicated by the professor
Problem solving	I complement of the master lessons in which they expose practical exercises that the student has to develop applying the algorithms seen in the subject.
Case studies	Study of real cases with examples of different Inventories realised analysing his memory and methodology. With special attention to the solutions of planning employed and the computer applications.
Studies excursion	They will realise three practical exits for the execution of a forest inventory previously designed in the classroom like practical case. The students will have of the material of necessary inventory for the take down of plots and his processed back in cabinet. It will have to present a memory of the inventory realised.

Personalized assistance

Methodologies	Description
Problem solving	
Studies excursion	

Assessment

	Description	Qualification	Training and Learning Results
Lecturing	Assistance and participation in the theoretical classes of the *asignatura (7.5 points). Delivery of exercises realised during the classes or of realisation out of the classroom (10 points) .	20	C24
Problem and/or exercise solving	Realisation of an examination in which they will evaluate the theoretical and practical concepts of the *asignatura, by means of questions type test, and of theoretical development, as well as practical exercises.	60	C24
Report of practices, practicum and external practices	COMPULSORY assistance to the practical classes of the *asignatura, that realise usually in field. In exceptional cases, in which the assistance continued of the student was not possible, will realise a practical examination in field. COMPULSORY assistance to trip of practices of the *asignatura.	20	C24
Self-assessment	(*)Realización de exercicios exemplo e casos prácticos como apoio ao estudante	0	

Other comments on the Evaluation

The student has to approve the practical part and the theoretical part separately. The assistance to the practices and to the trip of practices is of compulsory character to approve the *asignatura.

Sources of information

Basic Bibliography

Complementary Bibliography

DIEGUEZ, U. et al., **Dendrometría**, Mundi Prensa Fundación Conde del Valle de Salazar,

MARTÍNEZ CHAMORRO, et al., **Manual para a cubicación, taxación e venda de madeira en pe e biomasa forestal**, Universidade de Vigo,

MADRIGAL, A.; ÁLVAREZ, J.G.; RODRÍGUEZ, R.; ROJO, A., **Tablas de producción para los montes españoles**, Fundación Conde del Valle de Salazar,

DIEGUEZ, U. et al., **Herramientas Selvícolas para la Gestión Forestal Sostenible en Galicia**, Xunta de Galicia,

PRIETO RODRÍGUEZ, A.; LÓPEZ QUERO, M., **Dasometría. Versión española de Dendrométrie de L´ecole national du génie rural des aux et des forêts**, Editorial Paraninfo,

ACEMM, **Manual de prevención de riesgos laborales en el sector forestal**, Fundación para la prevención de riesgos laborales. Gobierno de Cantabria,

Recommendations

Subjects that continue the syllabus

Forest management/P03G370V01605
Physical planning and land management/P03G370V01701

Subjects that are recommended to be taken simultaneously

Projects/P03G370V01503

Subjects that it is recommended to have taken before

Mathematics: Statistics/P03G370V01301
Forestry/P03G370V01401
Use of forests/P03G370V01601

Contingency plan

Description

=== EXCEPTIONAL PLANNING ===
Given the uncertain and unpredictable evolution of the health alert caused by COVID-19, the University of Vigo establishes an extraordinary planning that will be activated when the administrations and the institution itself determine it, considering safety, health and responsibility criteria both in distance and blended learning. These already planned measures guarantee, at the required time, the development of teaching in a more agile and effective way, as it is known in advance (or well in advance) by the students and teachers through the standardized tool.

=== ADAPTATION OF THE METHODOLOGIES ===
* Teaching methodologies maintained

* Teaching methodologies modified

* Non-attendance mechanisms for student attention (tutoring)

* Modifications (if applicable) of the contents

* Additional bibliography to facilitate self-learning

* Other modifications

=== ADAPTATION OF THE TESTS ===
* Tests already carried out
Test XX: [Previous Weight 00%] [Proposed Weight 00%]
...

* Pending tests that are maintained
Test XX: [Previous Weight 00%] [Proposed Weight 00%]
...

* Tests that are modified
[Previous test] => [New test]

* New tests

* Additional Information