



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				
Department	Natural Resources and Environment Engineering			
Coordinator	Díaz Vázquez, Raquel			
Lecturers	Bartolome Mier, Javier Díaz Vázquez, Raquel			
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General description	<p>The *asignatura of *Dasometría consists of two big blocks: *Dasometría and Inventory.</p> <p>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.</p> <p>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.</p> <p>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.</p>			
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Competencies

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		
New	B6	C24	D8

Contents

Topic			
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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	24	38
Short answer tests	1	0	1
Practices report	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	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 attention	
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) .	17.5	C24
Short answer tests	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.	7.5	C24
Practices report	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.	7.5	C24

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'école 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
