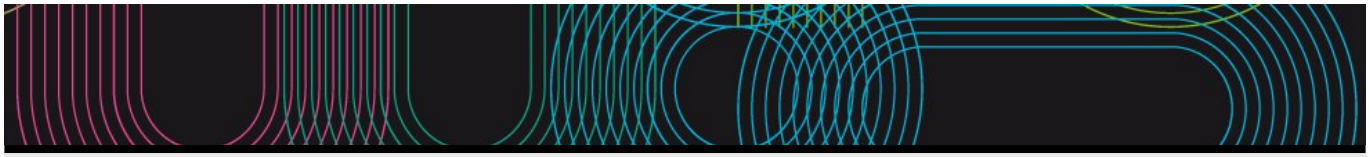

IDENTIFYING DATA				
Forestry machinery				
Subject	Forestry machinery			
Code	P03G370V01502			
Study programme	(*)Grao en Enxeñaría Forestal			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Mandatory	3rd	1st
Teaching language				
Department				
Coordinator	Diz Montero, Rubén			
Lecturers	Diz Montero, Rubén			
E-mail	rubendiz@uvigo.es			
Web				
General description	In this **asignatura pretends that he student *purchase *the *essential *knowledges that reads allow to comprise he *operation of wools machines *employed in wools forest *industries, that *know *the types of machines and *installations *more important *and *his *components. *His *knowledge results basic for him *analysis of him *operation, *design *and *construction of wools machines *and of *the teams associated the same *wools, *and in *general wools *industrial *applications in that they are used.			

Competencies	
Code	
B9	Knowledge of hydraulics, construction, electrification, forest roads, machinery and mechanization necessary both for the management of forest systems and for their conservation.
B11	Ability to characterize the anatomical and technological properties of wood and non-timber forest raw materials, as well as the technologies and industries of these raw materials.
C20	Ability to know, understand and use the principles of forestry machinery and mechanization.
D2	Ability to communicate orally and written in Spanish or in English
D5	Capacity for information management, analysis and synthesis
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.	B9 B11	C20	D2 D5 D8
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.			
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.			
21R. 2018 Capacity to recognize the need of a continuous training and realize this activity of independent way during his professional life.			
22R. 2018 Capacity to be to the day of the scientific and technological news.			

Contents

Topic	
1. Thermal machines. Generalities	Classification, theoretical appearances and principles of operation. Types of engines employed in forest machines.
2. Study of Thermal Engines	Engines of lit caused. Engines of lit by compression.
3. Study of compressors	Types of compressors. Installations of compression of air and pneumatic circuit.
4. Machinery used in forestry explotatrions.	Types of machines. Hydraulic circuits. Bombs and hydraulic engines
5. Machinery used in forestry industries	Installations and circuits

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	29	86	115
Presentation	2	10	12
Laboratory practical	14	6	20
Objective questions exam	1	0	1
Problem and/or exercise solving	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

	Description
Lecturing	Exhibition by part of the professor of the contents of the matter object of study. Resolution of problems and/or exercises related with the *asignatura
Presentation	Realisation of works in groups on thematic specific and presentation of the same in the classroom
Laboratory practical	Work with real machines in the laboratory to complement the contents of the matter, completed with some practice with specific software. Preparation of memories of practices.

Personalized assistance

Methodologies	Description

Lecturing	
Laboratory practical	
Presentation	

Assessment				
	Description	Qualification	Training and Learning Results	
Lecturing	Participation in the class. Proposal of **cuestions of theory justified on the content given.	0	C20	
Presentation	Realisation of works on the content of the **asignatura. Exhibition in the classroom.	20	C20	D5
Laboratory practical	Realisation of practices of laboratory and delivery of memories on the same.	20	C20	D5
Objective questions exam	Resolution of questionnaire of theory type test.	25	C20	D5
Problem and/or exercise solving	Resolution of problems and/or exercises related with the *temario of the **asignatura.	35	C20	D5

Other comments on the Evaluation

Sources of information

Basic Bibliography

Complementary Bibliography

Moran J and Shapiro H, **Fundamentos de Termodinámica Técnica**, 2004,

Çengel Y. y Boles M., **Termodinámica**, 7ª edicion (2011),

Payri F. y Desantes J.M., **Motores de combustión interna alternativos**, 2011,

Agüera Soriano J., **Termodinámica Lógica y Motores Térmicos**, 1993,

Creus Solé A., **Neumática e Hidráulica**, 2010,

IDAE, **Biomasa : maquinaria agrícola y forestal**, 2007,

Recommendations

Subjects that continue the syllabus

Primary wood processing industries/P03G370V01706

Subjects that it is recommended to have taken before

Physics: Physics I/P03G370V01102
Physics: Physics II/P03G370V01202
Mathematics: Mathematics and IT/P03G370V01103
Hydraulics/P03G370V01404