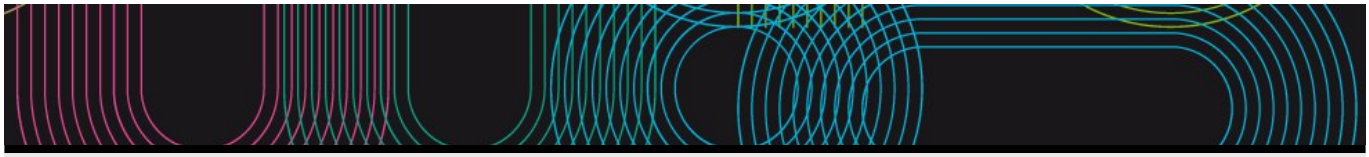
Universidade Vigo

Subject Guide 2018 / 2019



| 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 | Mechanical Engineering, Heat Engines & Machines, and Fluids | | | |
| 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 | | |
| (*)1. Adquirir un coñecemento práctico da aula e da xestión da mesma a través do pensamento reflexivo e análise crítica, pensamento propio da argumentación e relacionando teoría e práctica coa realidade da aula e do centro. | | | |
| Lana relation between competitions *and results, *and he weight of each competition inside wool matter show * in him *pdf *attach. http://forestales.uvigo.es/sites/default/files/19%20%20Machinery.*Pdf#**overlay-**context=are/**content/competitions-*and-resulted-of-*learning-by-matter | B9 B11 | C20 | D2 D5 D8 |

| Contents | |
|---|---|
| Topic | |
| 1. Thermal machines. Generalities | Classification, theoretical appearances and principles of operation.<br>Types of engines employed in forest machines. |
| 2. Study of Thermal Engines | Engines of lit caused.<br>Engines of lit by compression. |
| 3. Study of compressors | Types of compressors.<br>Installations of compression of air and pneumatic circuit. |
| 4. Machinery used in forestry explotatrions. | Types of machines.<br>Hydraulic circuits.<br>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 practices | 14 | 6 | 20 |
| Objective questions exam | 1 | 0 | 1 |
| Problem 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 practices | 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 attention

| Methodologies | Description |
|---|---|
| Lecturing | |
| Laboratory practices | |
| 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 practices | 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 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