



IDENTIFYING DATA

Forest Fires

| | | | | |
|---------------------|--|----------|------|------------|
| Subject | Forest Fires | | | |
| Code | P03G370V01802 | | | |
| Study programme | (*)Grao en Enxeñaría Forestal | | | |
| Descriptors | ECTS Credits | Choose | Year | Quadmester |
| | 6 | Optional | 4th | 2nd |
| Teaching language | Galician | | | |
| Department | | | | |
| Coordinator | Fernández Alonso, José María | | | |
| Lecturers | Fernández Alonso, José María | | | |
| E-mail | txema182@gmail.com | | | |
| Web | | | | |
| General description | Technicians of prevention *and extinction of forest *fires | | | |

Competencies

| | |
|------|---|
| Code | |
| B8 | CG-08: Capacidade para identificar os diferentes elementos: recursos naturais renovables susceptibles de protección, conservación e aproveitamento. |
| B12 | CG-12: Coñecemento dos procesos de degradación que afecten aos sistemas e recursos forestais: incendios. |
| B15 | CG-15: Capacidade para o uso das técnicas de restauración hidrolóxico forestal. |
| C27 | (*)CE-27: Capacidade para coñecer, comprender e utilizar os principios de: prevención e loita contra incendios forestais. |
| D5 | (*)CBI 5: Capacidade de xestión da información. |
| D6 | (*)CBI 6: Adquirir capacidade de resolución de problemas. |
| D7 | (*)CBI 7: Adquirir capacidade na toma de decisións. |
| D11 | (*)CBP 4: Habilidades de razoamento crítico. |
| D13 | (*)CBS 1: Aprendizaxe autónoma. |

Learning outcomes

| Expected results from this subject | Training and Learning Results | |
|---|-------------------------------|------------------------------|
| Identify the concept of forest fire, its characteristics, general and the problem of wool causality the different territorial levels | B8 B12 B15 | D5 D6 D7 D11 D13 |
| Lana relation between competitions and results, and the weight of each competition inside wool matter show in him pdf attach. | | |
| http://forestales.uvigo.es/sites/default/files/40%20Fires.*Pdf#**overlay.**context=are/**content/competitions-*and-resulted-of-*learning-by-matter | | |

Contents

| Topic | |
|--|--|
| 1. Forest fires. | Definition. General characteristics. Causality. Socioeconomic implications. Statistics. Repercussion throughout the world, the Mediterranean and Spain. |
| 2. Flammability and combustibility. | Heat transfer. Phases of combustion in case of fire. The temperature during forest fires. |
| 3 forest fuels. | Typology. The physical-chemical behavior with influence in the world. Models of fuel. |
| 4 Influence of meteorological and topographic factors on the spread of fire. | Relative humidity and temperature. Precipitation. Winds. Heat inversion. Electric storms. Atmospheric stability. |
| 5 Variables of basic behavior of forest fires. | Empirical physical and empirical models of propagation. Prediction systems. The dynamics of high intensity fires. The factors they cause. Fires of glasses. Fires of points. |

6 Fire Prevention.

| | |
|--|---|
| | Analysis of the causes. Determining sites. The educational legislation. Coercive work. The rates of fire hazard. Spanish system. Systems from America, Canada and Australia. |
| 7 Preventive forestry. Activities related to forest fires. | Influence of problems in the planning of forest fires. Firewall and firewall areas. Preventive forestry techniques. Amendments arborea vegetation. Scrub fuel control techniques. The prescribed burning schedule. Ignition techniques. Execution. Evaluation. |
| 8 Organization of a permanent fire protection structure. | Operations. Extinction techniques. Basic principles. Lines. Lineas control lines. Direct attack The indirect attack. |
| 9. Hand tools and equipment for security personnel. | Means of aerial combat in it fires. Characteristics general types, advantages and use limitaci3n.El auga.Retardantes: types, effects and applications. |
| 10 Influence of forest fires on ecosystems. | Adaptations of vegetation fires. Fire regimes. Post-secondary world. Impact of fire on the ground. Erosive effects of forest fires. Change the fire hydrologicos.Repelencia after the infiltration of water. Changes in the PTO. |
| 11 Restoration of burned areas. | Actions to control erosion. Revegetaci3n: Techniques, spices, advantages and limitations |

Planning

| | Class hours | Hours outside the classroom | Total hours |
|---|-------------|-----------------------------|-------------|
| Laboratory practises | 10 | 20 | 30 |
| Master Session | 30 | 30 | 60 |
| Practice in computer rooms | 6 | 6 | 12 |
| Autonomous troubleshooting and / or exercises | 2 | 20 | 22 |
| Outdoor study / field practices | 6 | 6 | 12 |
| Short answer tests | 1 | 3 | 4 |
| Troubleshooting and / or exercises | 5 | 5 | 10 |

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

Methodologies

| | Description |
|---|---|
| Laboratory practises | Resolution of practical cases by students with educational orientation and the use of specific laboratory of materials and equipment |
| Master Session | Exposition of the content of the subject, the theoretical bases and / or guidelines for the realization of A work, the exercise or project to be developed by students |
| Practice in computer rooms | Practices in computer classrooms Present practice in computer rooms to solve practical assumptions of students with the orientation and use of specific programs and resources of the teaching team |
| Autonomous troubleshooting and / or exercises | Problem solving and / or autonomous problem solving exercises that students must solve in a personalized way outside the class throughout the course |
| Outdoor study / field practices | Practical exercise management tools and fire fighting equipment |

All competences are type A, which they learn in all methodologies

Personalized attention

| Methodologies | Description |
|---|-------------|
| Laboratory practises | |
| Master Session | |
| Practice in computer rooms | |
| Outdoor study / field practices | |
| Autonomous troubleshooting and / or exercises | |
| Tests | Description |
| Short answer tests | |

| Assessment | | | | | |
|---|--|---------------|-------------------------------|-----|------------------------|
| | Description | Qualification | Training and Learning Results | | |
| Autonomous troubleshooting and / or exercises | *Approach of problems that he student has to resolve of personalised form *out of class to *the wide of him course | 30 | B8 B12 B15 | C27 | D6 D7 D13 |
| Short answer tests | *Approach of questions of *brief answer that he student has to resolve in class in him act of evaluation | 21 | B8 B12 B15 | C27 | D11 |
| Troubleshooting and / or exercises | *Approach of problems that he student has to resolve in class in him act of evaluation | 49 | B8 B12 B15 | C27 | D5 D6 D11 D13 |

Other comments on the Evaluation

All woools competitions are of type To *and evaluate * of conjoint *form **segun *the *procedures described previously.

Sources of information

Basic Bibliography

Juli G. Pausas, **¿QUÉ SABEMOS DE...? Incendios forestales**, CSIC e Catarata, 2012

Vega, J.A. e outros, **Acciones urgentes contra la erosión en áreas forestales quemadas. Guía para su planificación en Galicia**. Xunta de Galicia, 1, Fuegored, 2013

Complementary Bibliography

Arellano, S. e outros, **Foto-Guía de combustibles forestales de Galicia. Versión I**, 1, Andavira, 2016

Recommendations

Subjects that it is recommended to have taken before

Physics: Physics I/P03G370V01102

Physics: Physics II/P03G370V01202

Edaphology/P03G370V01302

Forestry/P03G370V01401