



IDENTIFYING DATA

Biology: Plant Biology

| | | | | |
|---------------------|--|-----------------|------|------------|
| Subject | Biology: Plant Biology | | | |
| Code | P03G370V01201 | | | |
| Study programme | (*)Grao en Enxeñaría Forestal | | | |
| Descriptors | ECTS Credits | Type | Year | Quadmester |
| | 6 | Basic education | 1st | 2nd |
| Teaching language | | | | |
| Department | | | | |
| Coordinator | Souto Otero, José Carlos | | | |
| Lecturers | Souto Otero, José Carlos | | | |
| E-mail | csouto@uvigo.es | | | |
| Web | http://webs.uvigo.es/csouto/ | | | |
| General description | Knowledge of the basic principles of the Vegetal Biology: anatomy, physiology and ecology of the plants. | | | |

Competencies

| Code | | Typology |
|------|---|----------------------|
| CG1 | CG-01: Capacidade para comprender os seguintes fundamentos necesarios para o desenvolvemento da actividade profesional: Biolóxicos. | • know |
| CG6 | CG-06: Capacidade para identificar os diferentes elementos: elementos bióticos. | • know • Know How |
| CG20 | CG-20: Coñecemento das bases da mellora forestal e capacidade para a súa aplicación práctica á produción de planta e á biotecnoloxía. | • know • Know How |
| CE8 | (*)CE-08: Coñecemento das bases e fundamentos biolóxicos do ámbito vexetal na enxeñaría. | • know |
| CT6 | (*)CBI 6: Adquirir capacidade de resolución de problemas. | • Know How |

Learning outcomes

| Learning outcomes | Competences |
|--|----------------------------------|
| They treat and they evaluate the distinguished competitions. | CG1 CG6 CG20 CE8 CT6 |

Contents

| Topic |
|-------|
| |

- 1.- Introduction to the vegetal Biology.
- 2.- General structure of the vegetal cells.
- 3.- The cellular division.
- 4.- Introduction to the vegetal anatomy.
Meristems.
- 5.- Parenchyma, collenchyma and sclerenchyma.
- 6.- Conductive fabrics. The xylem. The phloem.
- 7.- Epidermis. The peridermis.
- 8.- General structure of the vascular plants.
- 9.- The leaf.
- 10.- The flower.
- 11.- Alternation of generations in haplodiplontes.
- 12.- Fecundation.
- 13.- The plants and the water.
- 14.- Absorption of nutrients.
- 15.- The photosynthesis.
- 16.- The breath.
- 17.- Growth and development.
- 18.- Physiology of the seed.

Planning

| | Class hours | Hours outside the classroom | Total hours |
|---|-------------|-----------------------------|-------------|
| Master Session | 20 | 40 | 60 |
| Case studies / analysis of situations | 2 | 4 | 6 |
| Autonomous troubleshooting and / or exercises | 1 | 3 | 4 |
| Presentations / exhibitions | 1 | 5 | 6 |
| Laboratory practises | 25 | 25 | 50 |
| Outdoor study / field practices | 10 | 14 | 24 |

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

Methodologies

| | Description |
|---|--|
| Master Session | Exhibition of the contents of the *asignatura. They treat the competitions To2, To8, To25 and To61. |
| Case studies / analysis of situations | Formulation, analysis, resolution and debate of a problem or exercise related with the thematic of the *asignatura. They treat the competitions To2 and *B6. |
| Autonomous troubleshooting and / or exercises | Formulation, analysis, resolution and debate of a problem or exercise related with the thematic of the *asignatura, by part of the *alumnado. They treat the competitions To2 and *B6. |
| Presentations / exhibitions | Oral exhibition by part of the *alumnado of a concrete subject or of a work (previous presentation written). They treat the competitions To2, To8, To25 and To61. |
| Laboratory practises | Application to practical level of the theory of Vegetal Biology in the laboratory. They treat the competitions To2, To8, To25 and To61. |
| Outdoor study / field practices | Realisation of visits-exits to the field for the observation and study of the plants in his natural surroundings. They treat the competitions To2, To8, To25 and To61. |

Personalized attention

| Methodologies | Description |
|-----------------------------|-------------|
| Presentations / exhibitions | |

Assessment

| | Description | Qualification | Evaluated Competences |
|-----------------------------|--|---------------|----------------------------------|
| Master Session | Examination: proof with questions of short answer and others of long answer. The students have to answer to the questions to show the knowledges purchased on the matter. They evaluate the competitions To2, To8, To25, To61 and *B6. | 60 | CG1 CG6 CG20 CE8 CT6 |
| Presentations / exhibitions | It evaluates the preparation of the work and his oral exhibition. They evaluate the competitions To2, To8, To25 and To61. | 20 | CG1 CG6 CE8 |

| | | | |
|----------------------|---|----|---------------------------|
| Laboratory practises | Continuous evaluation of the activities realised in the practices, as well as of the memory that the students have to deliver when finalising the course. They evaluate the competitions To2, To8, To25 and To61. | 20 | CG1 CG6 CG20 CE8 |
|----------------------|---|----|---------------------------|

Other comments on the Evaluation

The second announcement evaluates the same that the ordinary announcement.

Sources of information

Basic Bibliography

Complementary Bibliography

Raven PH, Evert RF & Eichhorn SE, Biology of plants, WH Freeman and CP, 2005

Nabors M.W., Introducción a la Botánica, Pearson-Addison Wesley, 2006

Azcón-Bieto J & Talón M, Fundamentos de Fisiología Vegetal, Mc Graw Hill, 2008

Paniagua R, Citología e Histología vegetal y animal, Mc Graw Hill, 2002

Stern KR, Bidlack JE & Jansky SH, Introductory plant biology, Mc Graw Hill, 2008

Taiz L & Zeiger T, Plant physiology, 5ª ed.; Sunderland, MA : Sinauer Associates, 2010

Recommendations