

<b>Updated On</b>	2023/03/28										
<b>Curricular Year / Period</b>	2022/23 / S1										
<b>Course</b>	CTeSP - Agricultural Production										
<b>Curricular Unit</b>	Crop Production Techniques II										
<b>Language(s) of Instruction</b>	Português										
<b>ECTS/tempo de trabalho (horas)</b>	<b>ECTS</b>	<b>Total</b>	<b>Horas de contacto semestral</b>								
	<b>3</b>	<b>80</b>	<b>T</b>	<b>TP</b>	<b>PL</b>	<b>S</b>	<b>TC</b>	<b>E</b>	<b>O</b>	<b>OT</b>	<b>EC</b>
T - Theoretical; TP - Theoretical and practical; LP - Laboratory Practice; S - Seminar; TG - Tutorial guidance; FW - Fieldwork; T - Training; ; EC - Clinical teaching; O* - Other hours typified as Clinical Training under the Directive 77/453/EEC of June 27, adapted by Directive 2005/36/EC.											
<b>Teacher in charge (GDPR consent)</b> <small>[complete name, email]</small>	Ana Isabel Rodrigues Cordeiro / ana_cordeiro@ippportalegre.pt										
<b>Prerequisites</b> <small>[Curricular Units that must precede and specific entry competences]</small>	Not applicable										
<b>Learning outcomes</b> <small>[Description of the overall and specific objectives] [Knowledge, skills and competences to be developed by students]</small>	Make known the biology and ecophysiology of fruit, vine and olive trees, so that the student can understand the response of plants to biotic and abiotic factors. Teach how to program and perform the installation of an orchard, a vineyard or an olive grove. Show the importance of the appropriate choice of plant material and driving system, as well as their suitability to the constraints of the farm. Provide the ability to act independently in the management and maintenance of a permanent culture, managing the means and resources available to perform the different cultural operations of the technical itinerary and being able to plan its implementation at the most appropriate time.										
<b>Syllabus</b>	<ul style="list-style-type: none"> <li>1 - Importance and distribution of the main permanent crops in the world and in Portugal.</li> <li>2 - Botany and ecophysiology of the main fruit trees, vineyards and olive groves.</li> <li>3 - Biological and cultural cycle. Growth and biological cycle. Phenological states. Cultural cycle.</li> <li>4 - Installation of orchard, vineyard or olive grove. Site preparation. Choice of measure and density. Fertilization to the plantation. Plantation. Operations complementary to planting.</li> <li>5 - Varieties and propagation. Main varieties and rootstocks. Forms of propagation.</li> <li>6 - Driving systems.</li> <li>7 - Maintenance and conservation of the soil.</li> <li>8 Fertilization. Assessment of nutritional needs. Application of fertilizers and concealers.</li> <li>9 Watering Water needs. Irrigation management.</li> <li>10 Phytosanitary protection. Main enemies of permanent cultures in Portugal. Integrated protection.</li> <li>11 Maturation and harvesting. Monitoring of fruit / grape / olive maturation. Determination of the harvest date. Manual / mechanical harvesting.</li> <li>12 Pruning. Pruning season. Pruning typologies. Pruning waste management.</li> <li>13 Regions with appellation of origin.</li> <li>14 Culture Account.</li> </ul>										
<b>Teaching methodologies (including assessment)</b> <small>[Specify the types of assessment and the weights and evaluation criteria]</small>	<p><b>1 - Teaching methodologies</b></p> <p>Theoretical and theoretical-practical classes in the classroom, with theoretical exposition and practical application exercises. Study visits to see the different types of permanent crops (olive, vine and fruit) presented in the room and observe some cultural techniques on the ground. Performing group work in olive tree culture (programming and implementation of olive harvest) or vine pruning. Conducting group work on a fruit tree with oral presentation.</p> <p><b>2 - Period assessment</b></p> <p>The different evaluation elements have the following weight:</p> <p>Continuous assessment - Field report / practice and / or fruit tree group work - (30% + 30% = 60% of the final grade);</p>										

	<p>Written assessment - Two written assessments (20% + 20% of the final grade).</p> <p>The formula for obtaining the final grade is only applied when the student has a positive grade (&gt; 9.5 points) in both written assessments.</p> <p><b>3 - Examination assesement</b></p> <p>The different evaluation elements have the following weight:</p> <p>Continuous assessment - Field report / practice and / or fruit tree group work - (30% + 30% = 60% of the final grade);</p> <p>Written assessment - Final exam (Part I 20% + Part II 20% of the final grade).</p> <p>The formula for obtaining the final grade is only applied when the student has a positive grade (&gt; 9.5 points) in both parts of the Final Exam.</p>
<p><b>Bibliography</b></p>	<p><b>1 - Main Bibliography</b></p> <p>BARRANCO, D .; FERNANDEZ-ESCOBAR, R. and RALLO, L. (Ed.) (2008). The cultivation of olive. Ed. Mundi-Press, Madrid.</p> <p>BÖHM, J. (2013). The great book of Oliveira and Olive Oil. Dinalivro. Lisbon.</p> <p>CASTRO, R., CRUZ, A. &amp; BOTELHO, M. (2006). Wine Technology. MADRP, CRV Bairrada;</p> <p>GIL-ALBERT VELARDE, F. (1989). Treaty of fruit tree: morphology and physiology of fruit tree. Vol. I. Ed. MP.</p> <p>GIL-ALBERT VELARDE, F. (1989). Treaty of fruity arboriculture: Techniques of planting. Vol. III. Ed. Ed. MP.</p> <p>GIL-ALBERT VELARDE, F. (2003). Fruit Arboriculture Treaty: Fruit Pruning Vol. V. Ed. Mundi-Prensa, Madrid.</p> <p>HIDALGO, L. (1999) General Viticulture Treaty, Mundi-Prensa Editions, Madrid.</p> <p>HIDALGO, L. (2001) Ingeniería y Mecanización Vitícola. MUNDI EDITIONS PRESS. Madrid</p> <p>MAGALHÃES, N. (2008) .Working Viticulture. The Vine, The Vine and Terroir, Ed. Chaves Ferreira Publications. Lisbon.</p> <p>CROP FERTILIZATION MANUAL (2000). INIA-LQRS, Lisbon.</p> <p>PASTOR, M .; HUMANES, J .; See, V. and CASTRO, J. (1998). Design and management of olive plantations. Monography 22 / 98. Junta de Andalucía.</p> <p>SAAVEDRA, M. and PASTOR, M. (2002). Cultivation systems in olive groves. Española Agricultural Publisher. Madrid</p> <p>TORRES, L. (2007). Integrated olive tree protection manual. João Azevedo Editor.</p> <p><b>2 - Complementary Bibliography</b></p> <p>Documentation provided by teachers.</p>
<p><b>Special Situations</b> [Students with special status]</p>	<p><b>1 - Period assessment - Students with special status</b></p> <p>The different evaluation elements have the following weight:</p> <p>Continuous assessment - Field report / practice and / or fruit tree group work - (30% + 30% = 60% of the final grade);</p> <p>Written assessment - Two written assessments (20% + 20% of the final grade).</p> <p>The formula for obtaining the final grade is only applied when the student has a positive grade (&gt; 9.5 points) in both written assessments.</p> <p><b>2 - Examination assesement - Students with special status</b></p> <p>The different evaluation elements have the following weight:</p> <p>Continuous assessment - Field report / practice and / or fruit tree group work - (30% + 30% = 60% of the final grade);</p> <p>Written assessment - Final exam (Part I 20% + Part II 20% of the final grade).</p>

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The formula for obtaining the final grade is only applied when the student has a positive grade (> 9.5 points) in both parts of the Final Exam.
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