



Learning Module Outline

Short Description	
Description of the module	<p>This module describes the importance of cork material in relation to sustainability and the green economy as well as its current and potential uses beyond the well-known cork stopper. We will also establish the relationship between the use of cork and the contribution to the UN Sustainable Development Goals as well as the threats caused by climate change.</p> <p>The Module 2 is divided into the following 3 units:</p> <ol style="list-style-type: none"> 1. Cork and sustainability. <ol style="list-style-type: none"> 1.1. Introduction. 1.2. Cork ecosystem. 1.3. Environmental services. 1.4. Sustainable management. 1.5. Impact of climate change on the cork ecosystem. 2. Carbon footprint of cork products. <ol style="list-style-type: none"> 2.1. Introduction to carbon footprint. 2.2. Carbon fixation of forests. 2.3. Life cycle of cork products. 2.4. Carbon footprint values. 3. Potential uses of cork. <ol style="list-style-type: none"> 3.1. Main properties of cork. 3.2. Construction and design. 3.3. Textile and mobility. 3.4. Pharmacy and cosmetics. 3.5. Others. <p>The first unit focuses on sustainability and cork, where the environmental services of the cork forest ecosystem will be described. The second unit will focus on the carbon footprint (concept, calculation and values for different cork products). In the third unit, an overview of the different uses and applications of cork material will be given.</p>

Target Groups	
Targets	<ul style="list-style-type: none"> ● Engineering students (Aerospace, Aeronautical, Materials and Mechanical Engineering) ● Engineers, technical staff and leaders in Aerospace and Aeronautical Industries



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Wrocław University
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Learning Objectives	
Learning Objectives for this module	<p>Upon completion of this module, attendants will be able to:</p> <ul style="list-style-type: none"> ● Understand why cork is considered a sustainable material. ● To know and clarify the concept of carbon footprint and the different steps for its calculation. ● To get an introduction of different uses of cork material and the characteristics that makes it suitable for the aerospace sector.

Learning Resources	
Resources	<ul style="list-style-type: none"> ● Scientific Articles ● Audiovisual material ● Field trips ● Books and Thesis

Self-assessment and Learning Activities	
Self-assessment and Learning Activities to be created	<ul style="list-style-type: none"> ● Quizzes ● Oral presentations ● Video lectures ● Book



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