INGA 3D - Creative transfer of competence in 3D footwear CAD to VET professionals

LLP-LdV-ToI/2013-RO-024

3D Footwear Computer Aided Design

Handbook

Module III

3D CAD - APPLICATIONS TO ORTHOPAEDIC FOOTWEAR

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Course introduction and teaching methodology

With this course you will learn how to use the footwear design software "Icad3D+", which will help you design and create virtual footwear models, from the preparation of the digital last to the virtual rendering of the finished model.

This is a blended learning course that involves digital and physical teaching resources.

The core of the course is intended for face-to-face training and implies two basic requirements: CAD software / class with computers with the Icad3d+ software installed, and Internet connection to access the Online Learning Platform, where the training material is hosted.

The course is structured in Modules, so it can be customised by the trainees according to their training needs. It is split into four Modules, which in turn are subdivided into Units and Lessons. Please refer to the tables of contents of each Module.

This course has been conceived to be taught using the computer as a teaching means. The contents are expressed in text and image format, but there is no audio associated to them.

Knowledge transfer is based on slide presentations that provide step-by-step explanations (using text and static images) on how to use each of the software functions. To improve the knowledge of the theoretical-practical concepts, the slides are complemented by illustrative videos that show moving images of the theoretical content presented in the slides, in a fast, continuous and purely practical way. Each lesson has a multiple-choice test to assess the trainee's learning.

Recommendations for effective learning

- Access the lessons available from the Online Learning Platform (slide presentations), read the texts carefully and see the images on them.
- After reading each lesson, watch the associated videos to improve your understanding of the theoretical-practical concepts. The videos do not contain explanations; they are just a dynamic-visual complement to the learning contents presented on the slides.
- Access the assessment test when you think you have learnt the concepts.
- Practice the knowledge learnt using the Icad3D+ software whenever possible, to promote the development of the skills and competences pursued in this course.
- Make questions to your tutor/trainer to clarify possible doubts that may arise during the learning process.

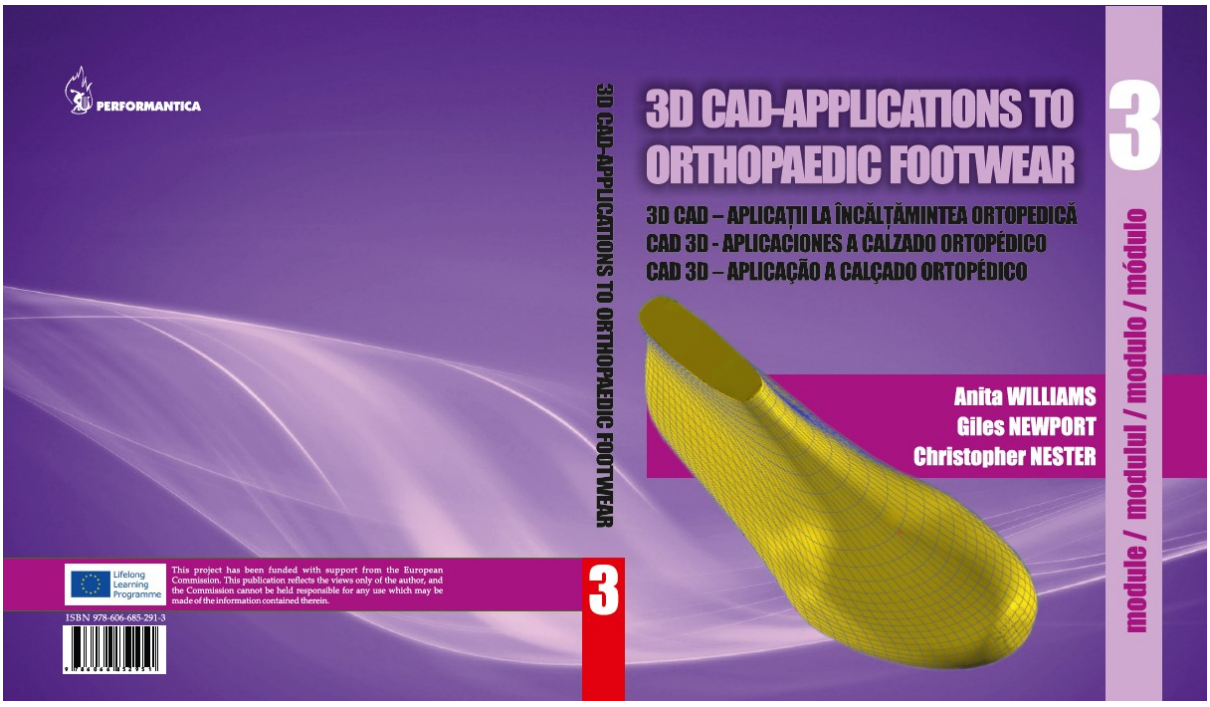
Description of Module III

This module explores how to select lasts and to design footwear for specific foot pathologies. The main objectives of this module are:

- to apply knowledge of 3D CAD technology powered by Icad3D+ software in order to select orthopaedic lasts appropriate for the specific foot pathology;
- to practice the 3D modelling process to a range of different footwear styles, therapeutic features and modifications which are compatible with the specific foot pathology and users expectations;
- to develop the skills and competences to produce virtual models of women's and men's orthopaedic footwear designs.

Each trainee has to study the theoretical content of the lesson and then to perform practical activities with Icad3d+software, such as: to choose lasts for specific pathologies applying knowledge of these pathologies, to apply the knowledge of design requirements for specific foot pathologies, to modify a footwear collection, applying the orthopaedic modifications and combinations of modifications to sole and heels for the specific cases presented in theoretical lessons.

Cover page



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