



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

**LLP-LdV-ToI/2013-RO-024**

# **MODULE II : 3D CAD – APPLICATIONS TO BASIC FOOTWEAR CONSTRUCTIONS**

Training Program

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<p><b>MODULE II : 3D CAD –APPLICATIONS TO BASIC FOOTWEAR CONSTRUCTIONS</b></p> <p><b>Total Teaching Hours – Lectures and Activities in class: 25 hours</b></p> <p><b>Individual Study: 25 hours</b></p> <p><b>ECVET : 2</b></p>		
<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>• To apply the 3D CAD technology powered by Icad3D+ software for designing basic footwear constructions types</li> <li>• To practice the 3D modelling process to a range of different footwear styles, characteristics and features which are compatible with design requirements and expectations</li> <li>• To develop skills and competences in producing detailed virtual models of women’s, men’s and children’s footwear</li> </ul>		
<p><b>UNIT 1: 3D CAD – Basic Constructions for Women’s Footwear (10 Hrs)</b></p>		
<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Understand the 3D designing process applied to the basic construction types for Women’s footwear</li> <li>• Know how to produce 3D CAD models for Women’s footwear</li> </ul>	<p><b>Skills</b></p> <ul style="list-style-type: none"> <li>• To apply knowledge of design requirements translated into technical 3D designs to basic construction types for Women’s footwear</li> <li>• To be able to produce 3D designs for basic constructions of Women’s footwear by following the predefined Icad3D+ modelling steps</li> </ul>	<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>• To demonstrate an ability to design highly refined 3D CAD prototypes and renderings for basic construction types of Women’s shoes, sandals and boots</li> </ul>
<p>Lesson 1.1. <b>Women’s Court Shoe</b></p> <p>Lesson 1.2. <b>Women’s Sandals</b></p> <p>Lesson 1.3. <b>Women’s Boots</b></p> <p>Unit 1 covers the 3D modelling steps and commands for completing basic models for women’s , footwear by: processing the lasts, designing 3D model lines, transferring and controlling 3D lines with 2D drawings, creating panels (pieces), adding texture, stitches and decorative elements, 3D modelling of sole/heel, rendering) etc.</p> <p><b>Activities in class:</b> This unit introduces practical lessons which are based on the learning outcomes accumulated by students in Module 1. Each lesson is designed as a tutorial, giving students the skills they need to build a certain type of footwear for women: court shoe, sandal and boot . The student will practice in class, in front of his/her computer that has installed the Icad3+ software, being guided by tutors to following the steps indicated in lessons.</p>		

UNIT 2: 3D CAD – Basic Constructions for Men’s Footwear (10 Hrs)		
<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>Understand the 3D designing process applied to the basic construction types for Men’s footwear</li> <li>Know how to produce 3D CAD models for Men’s footwear</li> </ul>	<p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To apply knowledge of design requirements translated into technical 3D designs to basic construction types for basic constructions of Men’s shoes</li> <li>To be able to produce 3D designs for basic constructions of Men’s shoes by following the predefined Icad3D+ modelling steps</li> </ul>	<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>To demonstrate an ability to design highly refined 3D CAD prototypes and renderings for basic construction types of Men’s casual and sport shoes</li> </ul>
<p>Lesson 2.1. <b>Men’s Casual Shoe – Derby style</b></p> <p>Lesson 2.2. <b>Men’s Casual Shoe –Oxford style</b></p> <p>Lesson 2.3. <b>Sport/ Training Shoe</b></p> <p>Unit 2 covers the 3D modelling steps and commands for completing basic models for men’s , footwear by: processing the lasts, designing 3D model lines, transferring and controlling 3D lines with 2D drawings, creating panels (pieces), adding texture, stitches and decorative elements, 3D modelling of sole/heel, rendering) etc.</p> <p><b>Activities in class:</b> This unit introduces practical lessons which are based on the learning outcomes accumulated by students in Module 1. Each lesson is designed as a tutorial, giving students the skills they need to build a certain type of footwear for men: Derby, Oxford, and sport shoe. The student will practice in class, in front of his/her computer that has installed the Icad3+ software, being guided by tutors to following the steps indicated in lessons.</p>		
UNIT 3: 3D CAD – Basic Constructions for Children’s Footwear (5 Hrs)		
<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>Understand the 3D designing process applied to the basic construction types for Children’s footwear</li> <li>Know how to produce 3D CAD models for Children’s footwear</li> </ul>	<p><b>Skills</b></p> <ul style="list-style-type: none"> <li>To apply knowledge of design requirements translated into technical 3D designs to basic construction types for Children’s footwear</li> <li>To be able to produce complete virtual models for Children’s footwear by following the predefined Icad3D+ modelling steps</li> </ul>	<p><b>Competences</b></p> <ul style="list-style-type: none"> <li>To demonstrate an ability to design highly refined 3D CAD prototypes and renderings for basic construction types of Children’s shoes and boots</li> </ul>
<p>Lesson 3.1. <b>Children’s Shoe</b></p> <p>Lesson 3.2. <b>Children’s Boots</b></p> <p>Unit 3 covers the 3D modelling steps and commands for completing basic models for children’s , footwear by: processing the lasts, designing 3D model lines, transferring and controlling 3D lines</p>		

with 2D drawings, creating panels (pieces), adding texture, stitches and decorative elements, 3D modelling of sole/heel, rendering) etc.

**Activities in class:** This unit introduces practical lessons which are based on the learning outcomes accumulated by students in Module 1. Each lesson is designed as a tutorial, giving students the skills they need to build a certain type of footwear for children: shoe and boot. The student will practice in class, in front of his/her computer that has installed the Icad3+ software, being guided by tutors to following the steps indicated in lessons.