

## Training for Digital Manufacturing: A Multilevel Teaching Model

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**Abstract :** The changes observed in the last years in the field of manufacturing and production engineering, popularly known as "Fourth Industry Revolution", utilizes the achievements in the different areas of computer sciences, introducing new solutions at almost every stage of the production process, just to mention such concepts as mass customization, cloud computing, knowledge-based engineering, virtual reality, rapid prototyping, or virtual models of measuring systems. To effectively speed up the production process and make it more flexible, it is necessary to tighten the bonds connecting individual stages of the production process and to raise the awareness and knowledge of employees of individual sectors about the nature and specificity of work in other stages. It is important to discover and develop a suitable education method adapted to the specificities of each stage of the production process, becoming an extremely crucial issue to exploit the potential of the fourth industrial revolution properly. Because of it, the project "Train4Dim" (T4D) intends to develop complex training material for digital manufacturing, including content for design, manufacturing, and quality control, with a focus on coordinate metrology and portable measuring systems. In this paper, the authors present an approach to using an active learning methodology for digital manufacturing. T4D main objective is to develop a multi-degree (apprenticeship up to master's degree studies) and educational approach that can be adapted to different teaching levels. It's also described the process of creating the underneath methodology. The paper will share the steps to achieve the aims of the project (training model for digital manufacturing): 1) surveying the stakeholders, 2) Defining the learning aims, 3) producing all contents and curriculum, 4) training for tutors, and 5) Pilot courses test and improvements.

**Keywords :** learning, Industry 4.0, active learning, digital manufacturing

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