



Unit 1: Advanced manufacturing – companies' mindset and current trends

Subunit 1.1: Basics

Activity 1.1.1: Introduction to industry 4.0

Learning Outcomes	Knowledge	Skills	Responsibility and Autonomy
<p>(paste the appropriate LOs from the LOs Matrix)</p>	<ul style="list-style-type: none"> fundamental knowledge of advanced manufacturing: <ul style="list-style-type: none"> key characteristics of 1st, 2nd, 3rd and 4th industrial revolution principles of industry 4.0 	<ul style="list-style-type: none"> Identify and illustrate the 4 development stages of industrial revolution compare key characteristics of 3rd and 4th industrial revolutions in order to recognise the benefits of the 4th industrial revolution in comparison with the 3rd one identify key principles of industry 4.0 explain how to apply key characteristics of industry 4.0 to examples from its respective VET field/ industry sector provide examples of the use of advanced manufacturing in different sectors show benefits of implementing advanced manufacturing for the improvement of product quality, cost reduction, flexibility to adapt to changes in the market and reduction of time to get new products to market distinguish between terms and concepts of digitization, digitalization and digital transformation differentiate between digitalization and Industry 4.0 in order to 	<ul style="list-style-type: none"> demonstrate knowledge and skills obtained for development of cooperation between VET and business sector



		<p>recognise the evolution</p> <ul style="list-style-type: none"> • demonstrate knowledge and skills obtained for development of cooperation between VET and business sector of the industrial production paradigm • list 9 main technologies that are transforming industrial production 	
<p>Type of activity</p>	<input checked="" type="checkbox"/> PDF <input type="checkbox"/> PPT <input type="checkbox"/> Image/Infographic <input checked="" type="checkbox"/> Video	<input checked="" type="checkbox"/> Test/Quiz <input type="checkbox"/> Game <input type="checkbox"/> Other (specify) <hr/>	
<p>Duration</p>	<p>90 minutes</p>		
<p>Activity (to be inserted into Moodle and seen by learners)</p>	<p>With the help of prepared articles and videos, we will provide basic information on industry 4.0 to be able to better understand the topic.</p> <p>Industry 4.0, also known as the fourth industrial revolution, takes the emphasis on digital technology from recent decades to a whole new level with the help of interconnectivity through the Internet of Things (IoT). It thrives to create a more connected/holistic ecosystem by combining IIoT, big data and smart manufacturing while at the same time focusing heavily on interconnectivity, automation, machine learning, and real-time data.</p> <p>To complete this unit, please do the following activities:</p> <ol style="list-style-type: none"> 1. Read the following article (15 minutes): „What is Industry 4.0? Everything you need to know“ https://www.techradar.com/news/what-is-industry-40-everything-you-need-to-know 2. Read the following article (45 minutes): “Industry 4.0: the essence explained in a nutshell“ in the article “Industry 4.0: the fourth industrial revolution – guide to Industrie 4.0” https://www.i-scoop.eu/industry-4-0/ 3. Watch the following videos (20 minutes): “What is Industry 4.0” https://www.youtube.com/watch?v=zlgDkbhDIwo o “What is the Fourth Industrial Revolution” https://www.youtube.com/watch?v=kpW9JcWxKq0 o “Industry 4.0: A Brief History” https://www.youtube.com/watch?v=JCswJldVoXk 		



4. Complete the short quiz to assess your knowledge.

Assessment	Online quiz
Resources	Computer with internet access Access to the platform/articles
Further reading	

