**COURSE 12: ADDITIVE MANUFACTURING FOR INDUSTRY 4.0**

Team: …………………………………………………………………………………………………………………………………………………

Student’s name: …………………………………………………………………………………………………………………………………

**Worksheet 6.1 – LABORATORY 6**

This worksheet is provided to you so that you can register the progress of specific activities throughout the implementation of Laboratory 6.

1. **Briefly describe the structure of your picture support. Mention the fixing mechanism and main general components.**

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1. **Provide the hand drawn sketch of your concept product, identifying the main components. Mention the main design rules which apply when printing lithophanes and to your specific proposed structure.**

PRODUCT CONCEPT SKETCH

**Design rules**

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1. **Explain the characteristics of each of the four pictures you’ve taken and if they required any corrections or image processing technique.**

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1. **Specify the selected tool for generating your lithophanes and mention the main steps taken.**

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1. **Mention which 3D printing parameters you adjusted and how they influence your build.**

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1. **Specify if the equipment required any specific preparation or maintenance procedures.**

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1. **Write down if your print required any additional adjustments (e.g. if you had printed fails and how you addressed them) and justify why.**

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1. **Mention if the removal of your parts or the post processing procedures were according to guides or if you performed any additional steps. Write down any problems you encountered during these stages and the measures you took to solve them.**

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1. **While assembling and testing of your manufactured product, write down any flaws or inconsistencies. Break them down into three main flaws/ fails categories: bad design; improper printing parameters; inadequate equipment calibration & maintenance.**

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1. **Summarize the results you obtained during Laboratory 6 and propose improvement paths.**

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1. **Complete the following task:**

* **Task 01:**

Identify at least two other 3D printing technologies, apart from FDM, that can be used to manufacture lithophanes. State the advantages and disadvantages of each one.

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| **TECHNOLOGY** | **ADVANTAGE** | **DISADVANTAGE** |
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