news DIGI3D

Welcome to the first issue of DIGI3D Magazine.

DIGI3D is a thirty-month (2024–2027) ERASMUS+ funded project aimed at fostering the adoption and advancement of digital technologies in 3D printing applications within the aerospace sector.

ESOGU ?

Eskişehir Osmangazi University (ESOGU) *has recently established the Department of Aeronautical Engineering with the support of Turkish Aerospace Industries (TAI) and the Turkish Air Force (TuAF). Building on its strong background in the aerospace sector, ESOGU has also founded the Aerospace Technologies Application and Research Center, further strengthening its research and innovation capacity in the aerospace field.*

DIGI3D Has Kicked Off!

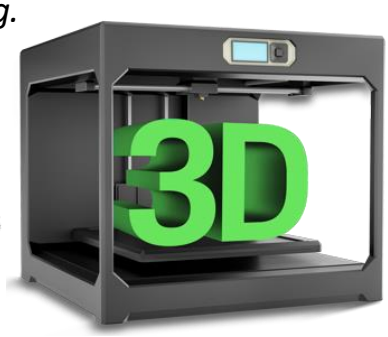
The **DIGI3D** Kick-off Meeting was held at **ESOGU** on **5–6 February 2025**. During the meeting, project partners discussed the overall organization of the project and appointed members to the Project Management Teams (PMTs) established within each partner institution. Key project outputs and planned Learning/Teaching/Training (LTT) activities were reviewed in detail. In addition, the project timetable and financial arrangements were discussed to ensure an efficient and well-coordinated project implementation.

Funded by the European Union

"Funded by the Erasmus+ Programme of the European Union. However, European Commission and Turkish National Agency cannot be held responsible for any use which may be made of the information contained therein"

*The **DIGI3D** project represents an advanced and forward-looking initiative in 3D printing education, firmly grounded in environmental awareness and sustainability. It reflects our commitment to pioneering an educational paradigm that not only meets current industry demands but also anticipates the future needs of the aerospace sector. Recognizing the lack of a systematic and integrated approach to 3D printing education, DIGI3D aims to transform how students learn and engage with additive manufacturing by leveraging digital tools while embedding green practices and sustainability into everyday engineering workflows.DIGI3D introduces a novel educational framework in which eco-friendly digitalization lies at the core of 3D printing education. This approach directly responds to the rapidly growing demand for skilled professionals capable of applying advanced 3D printing technologies in aerospace engineering. Through this initiative, the project seeks to empower a new generation of engineers with comprehensive expertise in additive manufacturing—professionals who are well equipped to lead the digital and sustainable transformation of aerospace production systems. To achieve this objective, DIGI3D establishes a structured educational pathway for 3D printing, organized into two complementary phases: Virtual Modeling and Physical Modeling. This dual-phase structure ensures a holistic learning experience. The Virtual Modeling phase focuses on Data Generation, Data Exchange, and Data Pre-processing, providing students with the conceptual foundations and practical skills required to operate within the digital ecosystem of 3D printing. In the subsequent Physical Modeling phase, students engage in 3D Manufacturing Processes and Post-processing, translating digital designs into physical components. This hands-on experience bridges theory and practice, enabling learners to connect digital workflows.*

*The **3D printing** process has gradually expanded to accommodate a wide range of materials. In its early stages, polymeric materials were primarily used due to their low melting temperatures, ease of processing, and cost effectiveness. As additive manufacturing technologies have advanced, various techniques have been successfully adapted for processing metallic materials and ceramics as well. This material diversification has greatly broadened the scope of 3D printing applications, enabling its use in demanding engineering fields, particularly aerospace and high-performance manufacturing.*



Funded by the European Union

"Funded by the Erasmus+ Programme of the European Union. However, European Commission and Turkish National Agency cannot be held responsible for any use which may be made of the information contained therein"