



NEWSLETTER

JANUARY, 2024

DIGITAL TRANSFORMATION CURRICULAR

Digital transformation (DT) has become a mandatory effort for all organizations, as the proliferation of technologies is driving a growing efficiency of business processes. However, such transformation can only be done with people, it is not enough to “throw technology” into the processes: employees must be involved and be a part of the process. Training is needed at two levels: management level, where coordinators redefine and reengineer processes according to business needs and applicable technology; and at the execution level, where employees must interact with technology in order to carry out the defined processes in the most efficient way.

The proposed digital transformation curriculum intends to familiarize learners with key subjects: big data, digital education, artificial intelligence, robotics and IoT. Each of these technologies is essential for DT, as they relate to emerging issues in contemporary organizations that drive change and have the potential to transform business models. We briefly describe the associated courses and contextualize them in DT scenarios (see [RESULT1](#) | [ASSISTANT \(ASSISTANT-ERASMUS.EU\)](#)).

Big data



Big data

The course on "Big Data" provides an overview of the fundamental concepts, tools, and techniques used in the processing, analysis, and visualization of large amounts of data. The course will begin by introducing the concept of big data and its importance in various domains. It covers the basic principles of data management and preprocessing, as well as the latest technologies and tools, including API and web scraping, ETL (extract-transform-load) steps, R programming, and dashboard design.

Digital Education



Digital Education

This course on "Digital Education" covers various topics related to digital education, starting with an introduction to defining digital education and the benefits and challenges associated with it. It covers different learning theories that apply to digital education, online learning strategies, and pedagogical approaches for online teaching. The course also explores digital tools for education such as learning management systems, social media, collaborative tools, interactive multimedia, and artificial intelligence.



Artificial Intelligence



Artificial Intelligence

The course will start by delimiting and defining the concepts of intelligence, AI and ML, followed by an overview of large areas within AI. Problem-solving techniques are explored: decision, search, and optimization. Knowledge representation, as a key aspect, is introduced, focusing on up-to-date methods. Besides the fundamental concepts of AI, studied since the 60s, recent developments in machine learning/deep learning and natural language processing are introduced, by showing and experimenting with computational systems that are becoming increasingly available.

Robotics and IoT



Robotics and IoT

The course on IoT and Robotics covers a wide range of topics related to the Internet of Things (IoT) and robotics. It provides an introduction to the definition of IoT and robotics and the benefits and challenges associated with their integration. The course covers different IoT and robotics technologies, and their applications in various fields. It also covers the design and development of IoT and robotics systems, including hardware, software, and network architectures, user interfaces and control systems. The course explores the ethical and legal issues related to privacy, security and job displacement. The course also provides insights into future trends in IoT and robotics, such as chatbots, swarm robotics, edge computing, autonomous vehicles, and smart cities.

PROJECT COORDINATOR



PROJECT PARTNERS



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