

(1) GENERAL

SCHOOL	SCHOOL OF INFORMATION SCIENCES & TECHNOLOGY		
ACADEMIC UNIT	DEPARTMENT OF STATISTICS		
LEVEL OF STUDIES	POSTGRADUATE		
COURSE CODE		TRIMESTER	1 OR 4
COURSE TITLE	Visualization and Data Science-Story Telling		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	CREDITS
		3	5
		30	5
COURSE TYPE	Specialization		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	ENGLISH		
COURSE DELIVERY METHOD	Distance		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://cloud.aueb.gr/index.php/s/N9W8bkZPiAysK5A		

(2) LEARNING OUTCOMES

Learning outcomes
• Develop data storytelling skills for effective communication of analytical findings. • Ability to identify, collect, and acquire datasets from appropriate sources. • Extract insights and knowledge from data using suitable analysis techniques. • Apply data visualization to identify patterns, trends, and relationships. • Construct a coherent narrative framework that explains the data and enhances audience understanding. • Present results in multiple formats and media according to the needs of the analysis. • Adapt data storytelling to different audiences and stakeholders to effectively disseminate conclusions.
General Competences
• Search, analyze, and synthesize data and information, using the necessary technologies. • Adaptation to new situations. • Decision-making skills. • Ability to work independently. • Work in an international environment. • Work in an interdisciplinary environment.

- Generation of new research ideas.
- Exercise of critical and self-critical thinking.
- Promotion of free, creative, and inductive thinking.

(3) SYLLABUS

This course teaches students the essential skills to become effective data storytellers. They will learn how to identify and acquire datasets, extract insights from the data, and present their findings in a variety of formats. Students will learn how to “connect the dots” within a dataset through data visualization and uncover the narrative thread that explains what is happening, engaging their audience in a compelling data-driven story. Additionally, students will learn how to tailor their data storytelling to different audiences and stakeholders, adapting the presentation to maximize understanding and impact.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Distance	
METHOD AND FREQUENCY OF COMMUNICATING WITH THE STUDENTS	Remotely via email and through weekly office hours (and whenever necessary) via teleconferencing or in-person office visits.	
ENSURING COMMUNICATION AMONG STUDENTS	Teleconference, Chat via eclass and/ or TEAMS, and QA sessions	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	MS Teams, e-class, MS Outlook, R, Python, WayGround or Kahoot educational games and quizzes	
REQUIRED EQUIPMENT AND TECHNOLOGY KNOWLEDGE	Camera, mic, PC, MS Office, and TEAMS	
COURSE POLICY ON PLAGIARISM AND PLAGIARISM DETECTION TOOLS	Turnitin	
COURSE POLICY ON USE OF AI TOOLS	The use of Artificial Intelligence is permitted with explicit reference to the bibliography (2) for the verbal correction of assignments and as long as students have understood the basic principles and methods of the course.	
TEACHING METHODS	Activity	Semester workload
	Lectures	30
	Assignment writing	40
	Lab Exercise	20
	Self-Study hours	40
	Course total	130
STUDENT PERFORMANCE EVALUATION	Evaluation language is English. Evaluation methods include lab exercises, written assignments, and/or written examinations. Oral examinations of the assignments may be conducted if clarifications are needed or if there	

	are suspicions of plagiarism or unauthorized use of Artificial Intelligence tools. Assessment criteria are provided on the course eClass platform and in the course materials.
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(5) RECOMMENDED BIBLIOGRAPHY

• Knafllic, C. N. (2015). Storytelling with data: A data visualization guide for business professionals. John Wiley & Sons.
