

COURSE OUTLINE

1. GENERAL

SCHOOL	ECONOMICS AND MANAGEMENT		
DEPARTMENT	ACCOUNTING & INFORMATION SYSTEMS		
LEVEL OF STUDY	POSTGRADUATE		
COURSE CODE		SEMESTER	WINTER
COURSE TITLE	BUSINESS ANALYTICS		
INDEPENDENT TEACHING ACTIVITIES		HOURS PER WEEK	ECTS
	LECTURES	2	4
	LABORATORY	1	2
COURSE TYPE	Scientific Area		
PREREQUISITE COURSES	None		
LANGUAGE OF INSTRUCTION AND EXAMINATION	Greek		
COURSE OFFERED TO ERASMUS STUDENTS	Yes (Only with project and/or essay)		
COURSE URL	https://exams-sod.the.ihu.gr/course/view.php?id=400		

2. LEARNING OUTCOMES

Intended learning outcomes of the course
<p>Business Analytics is a modern discipline whose objective is the analysis of data with elaborated methods and the extraction of knowledge, used for business decision making. The employment of Business Analytics contributes to the formation of effective strategies and can offer competitive advantages.</p> <p>After finishing the course the student will be able to:</p> <ul style="list-style-type: none"> • Understand Data Warehouses and carry out OLAP analysis • Understand Data Mining techniques for Association Rules, Classification and Clustering • Use data Mining software • Understand Text Mining techniques • Understand Big Data Issues • Design and implement practical Business Analytics projects
General Competences
<ul style="list-style-type: none"> • Data extraction, analysis and synthesis and knowledge discovery with the employment of elaborated techniques. • Adaptation to new situations • Decision making • Autonomous work • Group work • Interdisciplinary scientific work

- New research ideas
- Project management
- Promotion of free and creative thinking.

3. ΠΕΡΙΕΧΟΜΕΝΟ ΜΑΘΗΜΑΤΟΣ

- Data Warehouses and OLAP
- Introduction to Data Mining, Data Mining Stages, Data Mining Tasks, Data Types for Data Mining
- Data Preprocessing, Data Integration, Discretization and Normalization. Calculated Fields
- Data Visualization, Exploratory Data Analysis, Visualization methods
- Association Rules, often itemsets, Apriori, Support, Confidence, Lift
- Classification, Decision Trees, Neural Networks, Bayesian Networks
- Other Classification techniques, Prediction, special issues of classification
- Clustering, similarity measures, clustering methods
- Text Mining
- Cloud Computing
- Developing Business Intelligence Systems

4. TEACHING and LEARNING METHODS - EVALUATION

MODE OF INSTRUCTION	Face-to-face teaching in the classroom, laboratory exercises, asynchronous e-teaching	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	Power Point, assignments which require the use of computers, Moodle, email.	
TEACHING METHODS	Δραστηριότητα	Φόρτος Εργασίας Εξαμήνου
	Lectures	26
	Laboratory Exercises	13
	Assignment	41
	Training in data mining software and additional exercises	20
	Independent study	50
	Total contact hours and training	150
STUDENT PERFORMANCE EVALUATION	Assignment 30% Final exams 70%	

5. PRESCRIBED TEXTS-REFERENCES

Books:

Carlo Vercellis. *Business Intelligence Data Mining and Optimization for Decision Making*. Wiley

Albright & Winston. *Business Analytics: Data Science and Decision Making*. Cengage Learning

Ε. Κύρκος. *Επιχειρηματική Ευφυΐα και Εξόρυξη Δεδομένων*. Κάλλιπος

Journals:

International Journal of Business Intelligence and Data Mining, Inderscience

International Journal of Business Intelligence Research, IGI Global