

Teaching guide

IDENTIFICATION DETAILS

Degree:	Business Analytics		
Field of Knowledge:	Social and Legal Science		
Faculty/School:	Legal and Business Science		
Course:	Introduction to Big Data and Data Management		
Type:	Compulsory	ECTS credits:	6
Year:	1	Code:	5312
Teaching period:	First semester		
Area:	IT applied to Business Analytics		
Module:	Disciplinary Training		
Teaching type:	Classroom-based		
Language:	English		
Total number of student study hours:	150		

Teaching staff	E-mail
Carlos Poza Lara	carlos.poza@ufv.es
Carlos Ortega Fernández	cofcoforfe@gmail.com

SUBJECT DESCRIPTION

The different sources and types of data typically available for a company will be reviewed, as well as the different software solutions available depending on the typology and structure of the data.

Once students understand the variety of data and categorization, we move on the data intake systems and the challenges involved.

Furthermore, it is explained the data storage systems and how the raw data flow is achieved in classified and

categorized datasets. Students will have the main solutions explained.

Analytical systems within large stacks of data are where most students will begin to experience the power of Big Data. Workflows, business rules, pattern recognition and predictive modeling will be studied.

Finally, students will go to consumption, where apart from studying stuck delivery systems, the main focus will be on the visualization.

GOAL

It is intended that at the end of the course the student has learned to build a large "stack" of data, what the individual sections do and how the different challenges will need to use different solutions within each area of the "stack". The emphasis will be on generating business analysis solutions for the corporation.

PRIOR KNOWLEDGE

No prior knowledge is required

COURSE SYLLABUS

1.PART A – TECHNOLOGICAL ASPECTS

- a.GETTING STARTED WITH BIGDATA
- b.TECHNOLOGY FOUNDATIONS FOR BIGDATA
- c.BIG DATA MANAGEMENT
- d.ANALYTICS AND BIGDATA
- e.BIG DATA IMPLEMENTATION
- f.BIG DATA SOLUTIONS IN THE REAL WORLD

Book Reference:

- Big Data for Dummies. Judith Hurwitz et al. WILEY. 2013.

2.PART B – ORGANIZATIONAL ASPECTS

- a.WHAT DO WE MEAN BY DATA-DRIVEN
- b.DATA QUALITY
- c.DATA COLLECTION
- d.ANALYST ORGANIZATION
- e.DATDA ANALYSIS
- f.METRIC DESIGN
- g.STORYTELLING WITH DATA
- h.A/B TESTING
- i.DATA-DRIVEN CULTURE
- j.DATA DRIVEN C-SUITE
- k.PRIVACY, ETHICS AND RISK

Book Reference:

- Creating a Data-Driven Organization. Carl Anderson. O'Reilly Media. 2015.

EDUCATION ACTIVITIES

The methodology applied in this course is therefore communicative and collaborative. 'Communicative' implies active participation and involvement. 'Collaborative' provides the learner with the opportunity, both individually and in collaboration with others, to acquire more autonomy as well as a greater sense of responsibility for self and others. The teacher is a guide in this learning process.

This communicative and collaborative methodology implies:

PRESENTIAL ACTIVITIES

Expository Classes
Resolution of Exercises
Teamworks
Personalized tutoring
Group tutoring
Intermediate tests of evaluation and Final Exam

NON-PRESENTIAL ACTIVITIES

Theoretical study
Practical study
Teamwork
Virtual work in network

DISTRIBUTION OF WORK TIME

CLASSROOM-BASED ACTIVITY	INDEPENDENT STUDY/OUT-OF-CLASSROOM ACTIVITY
60 hours	90 hours

SKILLS

Basic Skills

Students must have demonstrated knowledge and understanding in an area of study that is founded on general secondary education. Moreover, the area of study is typically at a level that includes certain aspects implying knowledge at the forefront of its field of study, albeit supported by advanced textbooks

Students must be able to apply their knowledge to their work or vocation in a professional manner and possess skills that can typically be demonstrated by coming up with and sustaining arguments and solving problems within their field of study

Students must have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgments that include reflections on pertinent social, scientific or ethical issues

Students must be able to convey information, ideas, problems and solutions to both an expert and non-expert audience

Students must have developed the learning skills needed to undertake further study with a high degree of independence

General Skills

Capacity for organising, systematization and planning in identifying problems, levers and models in the context of big data.

Ethical commitment in the information society.

Capacity for achieving objectives, problem-solving and decision-making in the environment of quantitative and qualitative mass data.

Capacity for analysing data on a large scale from different sources: audiovisual, textual and numerical.

Specific skills

Know and understand the basic concepts of Big Data and its most characteristic elements.

Know and understand the basics of strategic planning and project managing and apply them in reality.

Know how to manage quantitative and computer tools for decision-making.

LEARNING RESULTS

The student knows how to build a large "stack" of data.

The student knows what the individual sections do and knows how to use different solutions within each area of the "stack"

The student generates business analysis solutions for the corporation.

LEARNING APPRAISAL SYSTEM

CONTINUOUS EVALUATION SYSTEM:
ACTIVE AND INTELLIGENT PARTICIPATION IN THE DISCUSSION OF CASES IN CLASS: 10%
RESOLUTION OF EXERCISES: 20% (presented in the time and form set by the teacher)
WORKS 20%
FINAL EXAM (to apply continuous assessment requires a minimum of 5 out of 10 in the final exam) 50%

ALTERNATIVE CONTINUOUS EVALUATION SYSTEM:
This system only applies for those students who are: repeating the course; have an official 'dispensa' signed by the dean of the corresponding faculty; on an international exchange program. It is the student's responsibility to be informed regarding course requirements, deadlines and exam dates, as well as to contact his/her teacher.
RESOLUTION OF EXERCISES 20%
WORK: 10%
FINAL EXAM (to apply the average with the exercises, and requires a minimum of 5 out of 10 points in the final exam) 70%

PUPILS OF SECOND AND SUCCESSIVE REGISTRATION:
In this case, students can choose between any of the two previous systems, after communicating to the teacher the first two weeks of class.

EXTRAORDINARY EXAM
The same criteria will be applied as in the previous cases.

INFORMATION ABOUT PLAGIARISM
Any plagiarism (*) by the student in an evaluation activity will be sanctioned and will imply a 0 in the qualification of that part of the subject, canceling the call in progress. This behavior, in addition, will be communicated to Direction that in turn will communicate to the General Direction, following the protocol established by the Francisco de Vitoria University.
(*) "Plagiarism" is considered any type of copy of questions or exercises of examination, memories of work, practices, etc., either totally or partially, of works alien to the student with the deception of making the teacher believe that they are own.

BIBLIOGRAPHY AND OTHER RESOURCES

Basic

Big Data for Dummies. Judith Hurwitz et al. WILEY. 2013.

Creating a Data-Driven Organization. Carl Anderson. O'Reilly Media. 2015.