COURSE DATA

DATA SUBJECT

Code: 46786
Name: Business Analytics
Cycle: Master's Degree
ECTS Credits: 5
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
2268 - Master's Degree in International Business Management	Facultat d'Economia	1	First quarter, Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2268 - Master's Degree in International Business Management	Business Analytics	COMPULSORY

COORDINATION

NARANGAJAVANA KAOSIRI YEAMDUAN

CABALLER TARAZONA MARIA

SUMMARY

Summary of Module Content: This module introduces the student to the fundamental concepts of the growing area of business analytics in a global context. It will explain vital concepts and techniques in understanding how descriptive, predictive and prescriptive analytics could help to optimise business and operational functions in both private and public sector organisations. Students will learn to apply basic business analytics techniques, communicate with analytics professionals, and effectively use and interpret analytic models to make better business decisions. Appropriate software (e.g. Excel, R, Jamovi) will be used to support learning.

Module Aims: This module aims to introduce students to a number of international business analytics concepts and techniques which are required in order to be able to understand contemporary business challenges in the international environment. The analytical concepts and techniques will be applied to assess and resolve some of the complex challenges faced by business managers in global industries. Students will appreciate the importance and contribution of these techniques to business and management decision making processes that help improve the performance of both private and public sector organisations in the international environment.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

COMPETENCES / LEARNING OUTCOMES

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Conocer y evaluar distintas aproximaciones conceptuales y saber utilizar con destreza métodos, técnicas y herramientas en el contexto empresarial global.

Develop the skill of selection of variables of interest, analysis of data and proposals for the decision making by means of data mining techniques.

Identify the sources of data, both digital and offline, and their analysis.

Ser capaz de identificar y analizar información compleja y con incertidumbre.

Ser capaz de tomar decisiones en situaciones de complejidad internacional y valorar sus consecuencias.

Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.

Students should possess and understand foundational knowledge that enables original thinking and research in the field.

DESCRIPTION OF CONTENTS

1. Introduction to Business Analytics (definitions, types of data, sources of data and data management)

2. Problem structuring, preparation and data mining

3. Descriptive Analytics - visualizing and exploring data, descriptive statistical measures

4. Predictive Analytics regression, forecasting, classification

5. Prescriptive Analytics - optimization, simulation

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Tutorials	12,00
Theory	18,00
Classroom practices	20,00
Total hours	**50,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	0,00
Preparation of lessons	50,00
Preparation for assessment activities	25,00
Resolution of case studies	0,00
Total hours	**75,00**

TEACHING METHODOLOGY

Lectures on key topics, supported by seminars or workshops, including: student introduced seminars based on pre-reading, individual and group working on questions and case studies and class discussions. Learning methods place specific emphasis on participation, interaction and active learning.

EVALUATION

Achievement of learning outcomes will be assessed through an in class **final exam** (50% of the final mark) and five **individual/team assignments** during the course (50% of the final mark).

For a retake within the same academic year, the following rules are applied:

a. The grades of tasks approved in the first round are kept with the same value for the second round.

b. The non-passed exam is re-evaluable in the second round.

Academic Honesty

Academic dishonesty such as submitting the work of others as your own is strictly prohibited. Depending upon the nature and extent of the violation, consequences may include failing the assignment, failing the course, and/or referral to disciplinary bodies at UV.

REFERENCES

- Albright, S.C. and Winston, W.L. (2015). Business Analytics: Data Analysis for Decision Making, Cengage Learning.
- Anderson, D., Sweeney, D., Williams, T. and Wisniewski, M. (2009). An Introduction to Management Science: Quantitative Approaches to Decision Making. Cengage Learning.
- Hillier, F. S., Liebermann, G. J., Bodhibrata, N. and Preetam, B. (2014). Introduction to Operations Research. McGraw Hill.
- Pochiraju, B. and Seshadri, S. (2019). Essentials of Business Analytics. An Introduction to the Methodology and its Applications. International Series in Operations Research & Management Science, Volume 264. New York: Springer.
- Shmueli, G., Bruce, P., Inbal, Y., Patel, N. R. and Lichtenberg Jr., K. C. (2017). Data Mining for Business Analytics (R Edition). Wiley.
- McGibney, Daniel P. (2023). Applied Linear Regression for Business Analytics with R : A Practical Guide to Data Science with Case Studies Springer International Publishing
- Weber, F. (2023).Artificial intelligence for business analytics : algorithms, platforms and application scenarios. Springer
- Paczkowski, Walter R. (2022).Business analytics : data science for business problems. Springer International Publishing.