



PERSONA CIENCIA EMPRESA
UNIVERSITAT RAMON LLULL

SCHOOL OF
MANAGEMENT

Master in International Marketing in a Digital Environment

Quantitative Methods of Research

Credits:	6 ECTS
Lecturer:	Marianna Bosch, PhD
Campus:	IQS School of Management (Barcelona)

BRIEF DESCRIPTION AND JUSTIFICATION

Quantitative Methods of Research is designed to help students to enhance their analysis of research issues. This research course will develop quantitative research skills to prepare individuals for further research, and to the PhD.

The focus is on the application of research concepts to real world issues, with examples drawn from staff own experience in a sector research. The course is taught by researchers with experience of conducting large and small scale research for a wide range of stakeholders.

COMPETENCIES

Well-informed decisions (CE1): Students will be able to identify their informational needs in order to minimize organizational risks choosing the best research or technical sources.

Planning (CE7): Students will be able to transform strategies into objectives, actions, and terms. They will be able to define the appropriate resources to achieve the objectives efficiently and identify the monitoring tools to take corrective actions.

Course content:

1. Introduction: quantitative approaches in scientific research
2. Information sources
 - a. Objectives of research and information needs
 - b. Primary and secondary sources of information
 - c. Survey design, sampling methods, questionnaires, measurement scales
3. Quantitative research methods
 - a. Types of variables and coding

- b. Basic descriptive analysis
- c. Hypothesis testing
- d. Classification and regression
- e. Dimensional reduction
- f. Automatic classification
- g. Nonparametric methods
- h. Causal models

Methodology

Education activities	ECTS	Competencies
Lectures presenting concepts and procedures	1,2	CE1, CE7
Practical sessions (exercises, cases)	1,2	CE1, CE7
Projects and work development	1,2	CE1, CE7
Personal study activities	1,8	CE1, CE7
Seminar and tutorials	0.6	CE1, CE7
TOTAL	6,0	

EXPLANATION OF TEACHING METHODOLOGY

The teaching methodology used in the course is based on the combination of various learning activities. The sessions of the course will combine theoretical sessions with practical parts.

EVALUATION

Evaluation methods	Weight (%)	Competencies
Final exam		
Midterm exams		
Monitoring class activities (cases, discussions, exercises)	40	CE1, CE7



Course works and presentations		
Projects	60	CE1, CE7
Participation		
Total weight	100%	

LEARNING OUTCOMES

As a result of the acquisition of the competences, the students will be able to:

1. Understand the relationship between research goal and information needs.
2. Know the advantages and disadvantages of primary sources of information in front of secondary ones.
3. Use different alternatives within the secondary sources.
4. Design processes for data collection from primary sources.
5. Know the basic techniques for analyzing data of a quantitative nature.
6. Apply the learned techniques for analyzing data sets by applying statistical software.
7. Interpret the basic quantitative research studies published in magazines in your area.

EVALUATION

Course candidates will be assessed on a continuous basis, with a strong focus on class participation. Class participation will be judged on quantity and quality of interventions in class. Students will be provided numerous occasions of oral participation during each session.

The assessment will take into account the following elements:

- Conducting an individual written report including: objectives for an investigation, information needs related to the objectives, design of a sampling plan and pre-design of a questionnaire.
- Conducting individual tests of "take-home" type solving a set of data analysis situations posed by the teacher.

BIBLIOGRAPHY

- Cabrera J., & McDougall, A. (2002). *Statistical Consulting*. New York: Springer-Verlag.
- Carter, R., Griffiths, W.E., & Lim G.C. (2012). *Principles of Econometrics*, 4/e. New York: Wiley.



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- Maindonald J, Braun WJ (2010). *Data Analysis and Graphics Using R – an Example-Based Approach*. Cambridge University Press.
- Owen. The R Guide. At: <http://cran.r-project.org/doc/contrib/Owen-TheRGuide.pdf>
- Venables and Smith. An Introduction to R. At: <http://cran.r-project.org/doc/manuals/R-intro.pdf>