

NOVA Information Management School

NOVA IMS

Course	Information in the Society
Coordinator:	Fernando Bação
Objectives:	<p>In terms of general skills, this course aims to stimulate:</p> <ul style="list-style-type: none"> • The skills of information analysis and synthesis; • Organizational and planning skills; • The solution of partially structured problems; • The ability to work in a team; • The ability to apply the knowledge acquired; • Creativity; • Leadership; • The ability to work autonomously; <p>In terms of knowledge, after completing the course, students should:</p> <ul style="list-style-type: none"> • Understand the importance of Information Management in the analysis of the major issues of today's society; • Understand the career opportunities that are open to the Information Manager and the relevance of their contribution to wealth creation in our society; • Understand the characteristics of the designated area of Data Science; • Understand the main characteristics of data as an economic resource; • Understand the main paradigms of the information economy; • Understand the criteria in the use of the main measures of descriptive statistics (central tendency, dispersion, skewness, kurtosis, normal distribution); • Estimate probabilities, permutations and combinations; • Master the main types of data visualization and the criteria in its use in the analysis of large amounts of data; • Master the main chart types and criteria in their use in the presentation and synthesis of information;

	<ul style="list-style-type: none"> • Understand and use properly hierarchical methods of data clustering (hierarchical methods); • Understand the fundamentals of regression; • Understand the process of instance-based classification; • Understand Bayesian classifiers; • Master the main components of statistical databases; • Understand the Meta-information concept and its relevance to the proper use of statistical information; • Ability to explore sources of statistical data and to analyze information; • Capability to use the Pordata database; • Knowledge of recent developments in the Portuguese society through demography and other social dynamics;
Curricular Unit Contents:	<ol style="list-style-type: none"> 1. Presentation of the course; 2. What does the Information Manager do? 3. The Information Revolution; 4. Characteristics of data while a resource; 5. Descriptive statistical measures; 6. Probabilities, permutations and combinations; 7. Data visualization and graphic expression; 8. Data Grouping (hierarchical methods); 9. Relationship between variables; 10. Instance-based classification 11. Bayesian classifiers 12. From the Statistics to the Databases; 13. The database and the website "PORDATA"
Teaching methods:	Theoretical and practical classes;
Grading methods:	Continuous evaluation: <ul style="list-style-type: none"> • Task 1 (10%) • Task 2 (10%) • Project (30%) • Exam (50%) Evaluation through exam: <ul style="list-style-type: none"> • Exam (70%) • Project (30%)

Bibliography:	<ul style="list-style-type: none">• Notes of the course that have, in addition to the professors' notes, the set of mandatory bibliographic references (available in NOVA IMS Online);• The Economist (2003) "Numbers Guide – the essential of business numeracy", fifth edition, Profile Books LTD, London• Yau, N., (2011) "Visualize This – the FlowingData Guide to Design, Visualization, and Statistics", Wiley Publishing Inc.• Maria João Valente Rosa e Paulo Chitas (2010) "Portugal os números", Ensaio nº 3 da colecção Ensaios da Fundação Francisco Manuel dos Santos• Maria João Valente Rosa e Paulo Chitas (2010) "Portugal e a Europa: os números", Ensaio nº 39 da colecção Ensaios da Fundação Francisco Manuel dos Santos
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