Syllabus

Course Description

Course Title	Information Systems and Data Management
Course Code	27269
Course Title Additional	
Scientific-Disciplinary Sector	ING-INF/05
Language	English
Degree Course	Bachelor in Economics, Politics and Ethics
Other Degree Courses (Loaned)	
Lecturers	
Teaching Assistant	
Semester	Second semester
Course Year/s	1
CP	2
Teaching Hours	20 (tba)
Lab Hours	20 (tba)
Individual Study Hours	-
Planned Office Hours	6
Contents Summary	The course introduces the fundamental concepts of data management and information systems, with a focus on applications in the business context. Students will learn the basics of data organisation and storage, the structure of relational databases and the functioning of business information systems. Practical tools for data management and analysis will also be presented, including spreadsheets, database query languages (SQL), and software for data visualisation and management.
Course Topics	File handling, basic computer usage, Windows, computer networks and security requirements, data management, information systems Microsoft Excel, graphs, formulas, functions, data management in Excel Microsoft Access basic, querying a database.

Keywords	tbd
Recommended Prerequisites	English understanding and reading at level B2. Basic computer usage, in particular Microsoft Windows and file handling.
Propaedeutic Courses	tbd
Teaching Format	Front-of-class teaching in standard classroom, Front-of-class teaching in computer lab with examples and exercises assigned in class, interactive exercises in standard classroom and in computer room held by teaching assistant.
Mandatory Attendance	Suggested, but not required; for non-attending students additional study material will be provided on the course's website on OLE
Specific Educational Objectives and Learning Outcomes	Knowledge and understanding: At the end of the course, students will have acquired the following knowledge and understanding: knowledge of mathematical techniques for solving optimisation problems; knowledge of probabilistic and inferential tools that allow the use of statistical models; ability to model social and economic phenomena; ability to interpret the results of various mathematical-statistical models applied to economics; basic knowledge of data management and computer programming for statistical and econometric analysis of socio-economic data; knowledge of the technical vocabulary used in this area of learning. Ability to apply knowledge and understanding: Ability to manage simple databases and perform socio-economic data analysis with the support of software. Autonomy of judgement: Acquisition of the capacity for judgement and of the methodological tools useful for the critical analysis of data, sources, assumptions and implications of scientific practice, of the political, ethical and legal context within which economic phenomena are set and with which they interact Communication skills: The courses contributes to the overall objectives: Fostering fluency

	(oral and written) in Italian, German and English, including translation between these languages; intercultural competence, conceptual awareness, ability to summarise and express oneself in writing, particularly with regard to the drafting of scientific or science-based document. Learning skills: Promotion of critical thinking and analytical skills to focus on complex problems in their long-term dynamics and in the variety of their implications, including ethical ones
Specific Educational Objectives and Learning Outcomes (additional info.)	tbd
Assessment	Written test to assess knowledge on theoretical concepts (basic computer usage, computer networks and security requirements etc.). Practical assessment to test data organization, handling and modification through Excel. Practical assessment to test data extraction and handling ability on Access. The possibility of having mid-terms on item 1 and 2 will be evaluated during the course.
Evaluation Criteria	Grade is the weighted average of assessment 1 (30%), assessment 2 (50%), assessment 3 (20%). File handling and severe basic computer errors count negatively on the final grade. Particular emphasis is given to solutions which are optimal, efficient and extensible. No differences in the assessment between attending and non-attending students.
Required Readings	tbd
Supplementary Readings	tbd
Further Information	
Sustainable Development Goals (SDGs)	