

Syllabus

Descrizione corso

Titolo insegnamento	Introduzione alla gestione e all'analisi dei dati
Codice insegnamento	27601
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	SECS-S/01
Lingua	Inglese
Corso di Studio	Corso di laurea magistrale in Politiche Pubbliche e Governance innovativa
Altri Corsi di Studio (mutuati)	
Docenti	dr. Giulia Bertagnolli, Giulia.Bertagnolli@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/49312 Dott. mag. Andrea Molinari, Andrea.Molinari@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/3420 dr. Tun-I Hu, TunI.Hu@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/48974
Assistente	
Semestre	Primo semestre
Anno/i di corso	1
CFU	8
Ore didattica frontale	48 (24 Bertagnolli + 24 Molinari)
Ore di laboratorio	6 (Hu)
Ore di studio individuale	
Ore di ricevimento previste	24 (12 Bertagnolli + 12 Molinari)
Sintesi contenuti	This course equips students with practical computer skills tailored

	<p>to the public sector, including data extraction, database management with SQL, data visualization using PowerBI, and data handling and analysis in R. It emphasizes realworld applications such as processing administrative data, conducting statistical analysis, and producing interpretive reports that inform evidencebased policymaking. Ultimately, students will gain confidence in using these tools to extract insights, communicate findings, and support effective governance.</p>
Argomenti dell'insegnamento	1. Data Management Fundamentals, 2. Data Visualization, 3. Introduction to R, 4. Descriptive Analysis, 5. Time Series Data, 6. Survey Data.
Parole chiave	Data management, Data visualization, Descriptive data analysis, Time Series, Regression, Data analysis with R.
Prerequisiti	B1 level in English is required to sit the exam. Students without a background in statistics are strongly recommended attending the Preparatory Course in Statistics scheduled at the beginning of the first semester.
Insegnamenti propedeutici	
Modalità di insegnamento	The course will combine in-class explanations of data analysis procedures with problem-solving activities and the discussion of case studies. Students will be encouraged to participate actively, providing them with the opportunity to develop their problem-solving skills in realistic and applied contexts.
Obbligo di frequenza	Attendance is recommended, but not mandatory.
Obiettivi formativi specifici e risultati di apprendimento attesi	
Obiettivi formativi specifici e risultati di apprendimento attesi (ulteriori info.)	
Modalità di esame	<p>1. Voluntary midterm exam covering the first half of the course materials (data management fundamentals and data visualization) and 2. Mandatory final exam covering either the second half of the course or the entire course.</p> <p>The final grade will be a weighted average of the midterm exam</p>

	(50%) and final exam (50%). Students that do not take the midterm or reject their midterm grade will be given a longer final exam that will count for 100% of the final grade.
Criteri di valutazione	Students will be evaluated on their ability to: Understand and apply data management, visualization, and analysis techniques (both correct procedures and accurate solutions are essential); summarize and interpret descriptive statistics, as well as R code, and common outputs; demonstrate analytical thinking and clarity in communication; interpret exam questions accurately, providing correct, well-reasoned answers; establish connections between topics, demonstrating critical thinking skills.
Bibliografia obbligatoria	Data Visualization with R OSDC MiniSeries: Reproducible Research (available here). Additional materials and references will be provided by the lectures throughout the course.
Bibliografia facoltativa	Stock, James H. and Mark W. Watson. Introduction to Econometrics. Pearson, 2014
Altre informazioni	
Obiettivi di Sviluppo Sostenibile (SDGs)	Istruzione di qualità