



# UNIVERSITÀ DEGLI STUDI DI PALERMO

<b>DEPARTMENT</b>	
<b>ACADEMIC YEAR</b>	
<b>ANNO ACCADEMICO EROGAZIONE</b>	
<b>SUBJECT</b>	
<b>CODE</b>	
<b>SCIENTIFIC SECTOR(S)</b>	
<b>HEAD PROFESSOR(S)</b>	AUGUGLIARO LUIGI      Professore Ordinario      Univ. di PALERMO
<b>OTHER PROFESSOR(S)</b>	AUGUGLIARO LUIGI      Professore Ordinario      Univ. di PALERMO DE LUCA GIUSEPPE      Professore Associato      Univ. di PALERMO
<b>CREDITS</b>	
<b>PROPAEDEUTICAL SUBJECTS</b>	
<b>MUTUALIZATION</b>	
<b>YEAR</b>	
<b>TERM (SEMESTER)</b>	
<b>ATTENDANCE</b>	
<b>EVALUATION</b>	
<b>TEACHER OFFICE HOURS</b>	<b>AUGUGLIARO LUIGI</b> Tuesday 10:00 12:00 Stanza n. 201 - secondo piano <b>DE LUCA GIUSEPPE</b> Monday 10:00 12:00 Tuesday 12:00 14:00 Stanza 5.14

DOCENTE: Prof. LUIGI AUGUGLIARO

<b>PREREQUISITES</b>	digital competence;
<b>LEARNING OUTCOMES</b>	<p>Knowledge and understanding skills</p> <p>The student will know the basic principles of empirical analysis through the 'application of software to data.</p> <p>Ability to apply knowledge and understanding The student will be able to organize, manipulate, process and interpret data to conduct empirical research . He/she will be able to make appropriate use of various of software support systems (online help, manuals, and other sources) to overcome any obstacles encountered in carrying out specific tasks. In particular, the knowledge acquired will cover the 'use of commands to import data, construct and interpret graphs, and transform and manipulate data, through user-defined functions for empirical analysis</p> <p>Autonomy of judgment The student will be able to perform empirical analysis with complete autonomy, using the main R and Stata commands seen during the course.</p> <p>Communication skills The student will be: (a) able to use practically what he/she learned in the course and to communicate it to possible recipients. (b) able to use R, excel and Stata both as data analysis software.</p>
<b>ASSESSMENT METHODS</b>	<p>Learning will be assessed through a practical test that tends to test the student's skills and knowledge in the subject area of the course. The practical test consists of a limited number of problems related to Stata, Excel and R software. The examinee's skills and knowledge are assayed through the answers given in the test and based on these the final grade is formulated. The final grade is the sum of the scores given in advance for complete, partial, or no resolution of each administered problem. Specifically, to pass the exam, thus obtaining a grade of not less than 18/30, the student must demonstrate elementary achievement of the objectives.</p> <p>The objectives achieved are considered elementary when the examinee demonstrates that he/she has acquired a basic knowledge of the topics described in the syllabus, is able to make minimal connections between them, demonstrates that he/she has acquired a limited autonomy of judgment; his/her language is sufficient to communicate with the examiners. On the other hand, to achieve a score of 30/30 cum laude, the student must demonstrate excellent achievement of the intended objectives. The objectives achieved are considered excellent when the examinee has acquired full knowledge of the topics of the program, demonstrates the ability to apply the knowledge acquired even in contexts advanced from those proper to the teaching, expresses himself/herself with lexical competence even within the specific language of reference and is able to elaborate and express autonomous judgments based on the knowledge acquired.</p> <p>Compensatory tools and dispensatory measures will be guaranteed by the Disability and Neurodiversity Center - University of Palermo (Ce.N.Dis.) to students with disabilities and neurodiversity, based on specific needs and in implementation of current legislation.</p>
<b>TEACHING METHODS</b>	Lectures and classroom exercises.

**MODULE**  
**SOFTWARE FOR ECONOMIC AND FINANCIAL DATA ANALYSIS 2**

*Prof. GIUSEPPE DE LUCA*

**SUGGESTED BIBLIOGRAPHY**

In aggiunta alle dispense fornite dal docente, alcuni testi di riferimento sono:

Acock, A.C. (2018), *A Gentle Introduction to Stata (Sixth Edition)*, Stata Press, College Station (Texas).

Long J.S. (2009), *The Workflow of Data Analysis Using Stata*, Stata Press, College Station (Texas).

Kohler, U. and Kreuter, F. (2012), *Data Analysis Using Stata (Third Edition)*, Stata Press, College Station (Texas).

Mitchell M.N. (2010), *Data Management Using Stata: A Practical Handbook (Second Edition)*, Stata Press, College Station (Texas).

<b>AMBIT</b>	10883-Abilità informatiche e telematiche
<b>INDIVIDUAL STUDY (Hrs)</b>	47
<b>COURSE ACTIVITY (Hrs)</b>	28

**EDUCATIONAL OBJECTIVES OF THE MODULE**

1. Management, analysis, summary, and representation of real socioeconomic data with Stata
2. Introduction to statistical and econometric analyses
3. Basic notions on the functioning and the usage of personal computers
4. Modular approach to problem-solving
5. Programming tools and iterative loops to perform sequential operations
6. Basic operations of matrix algebra

**SYLLABUS**

Hrs	Frontal teaching
2	Introduction to Stata
4	Data structure, types of variables, load of socioeconomic datasets in Stata
2	Do-files, log-files, and modular programming
2	Data management operations
2	Combing, transforming, and reshaping datasets
2	Table of summary statistics and graphs
2	Programming tools and loops
Hrs	Practice
2	Exercises on import of socioeconomic datasets by do-files
3	Exercises on data management operations
2	Exercises on combing, transforming, and reshaping datasets
2	Exercises on tables of summary statistics and graphs
3	Exercises on loops for data management operations

**MODULE**  
**SOFTWARE FOR ECONOMIC AND FINANCIAL DATA ANALYSIS 1**

*Prof. LUIGI AUGUGLIARO*

**SUGGESTED BIBLIOGRAPHY**

- Introduction to Data Science: Data Analysis and Prediction Algorithms with R. Rafael A. Irizarry (2020). CRC Press.  
- Advanced R, Second Edition. H. Wickham (2019). CRC Press.

<b>AMBIT</b>	10883-Abilità informatiche e telematiche
<b>INDIVIDUAL STUDY (Hrs)</b>	47
<b>COURSE ACTIVITY (Hrs)</b>	28

**EDUCATIONAL OBJECTIVES OF THE MODULE**

The course is aimed to transmit in-depth graduate knowledge of the statistical programming language 'R'.

**SYLLABUS**

Hrs	Frontal teaching
4	Introduction to Excel, importa data and their manipulation
2	Introduction to R programming language
4	Introduction to R programming language: R objects: vectors and factors
4	Arrays, matrices, list and data.frames
2	Introduction to "tidyverse", Reading external datasets
Hrs	Practice
4	Introduction to Excel, importa data and their manipulation
4	R objects
4	Introduction to "tidyverse", import of external data and their analysis