UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Culture e società
ACADEMIC YEAR	2021/2022
MASTER'S DEGREE (MSC)	COOPERATION, DEVELOPMENT AND MIGRATIONS
SUBJECT	DEVELOPMENT INDICATORS
TYPE OF EDUCATIONAL ACTIVITY	B
AMBIT	50603-discipline economiche
CODE	22030
SCIENTIFIC SECTOR(S)	SECS-S/05
HEAD PROFESSOR(S)	OLIVERI ANTONINO Professore Associato Univ. di PALERMO MARIO
OTHER PROFESSOR(S)	
CREDITS	6
INDIVIDUAL STUDY (Hrs)	110
COURSE ACTIVITY (Hrs)	40
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	1
TERM (SEMESTER)	1° semester
ATTENDANCE	Not mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	**OLIVERI ANTONINO MARIO** Tuesday 15:30 17:30 Piattaforma Microsoft Teams o incontri in presenza, da concordare via email e se le condizioni sanitarie lo renderanno possibile.

PREREQUISITES	Students are expected to possess basic knowledge of mathematics, which was gained at high schools. In particular: the Cartesian reference system, and the linear equation. The first hours of the course are in any case devoted to literate students who have never studied the subject before. For more expert students, this means usefully reviewing their knowledge.
LEARNING OUTCOMES	1) KNOWLEDGE AND UNDERSTANDING: students are expected to demonstrate knowledge and understanding of statistical methodologies aiming at constructing elementary and composite indicators in the socio-economic field. 2) APPLYING KNOWLEDGE AND UNDERSTANDING: students should be able to apply their knowledge and understanding in new or unfamiliar environments within broader (or multidisciplinary) contexts relating to the field of development, cooperation and migrations. 3) MAKING JUDGEMENTS: students are required to possess the ability of integrating knowledge and handle complexity, as well as the ability of formulating judgements with incomplete or limited information. Students should also possess ability of analysing consequences relating to the application of their knowledge and judgements. 4) COMMUNICATION: students are expected to communicate clearly and unambiguously their conclusions, and the knowledge and rationale underpinning conclusions to specialist and non-specialist audiences. In order to gain this goal students will be solicited to prepare and present documents and short research reports to be discussed during the lectures with classmates and the teacher. 5) LIFELONG LEARNING SKILLS: students should possess the learning skills which will allow them to continue their studies autonomously. The development of these skills will follow efforts to analyse the socio-economic situation of countries, by using primary and secondary information and scientific literature.
ASSESSMENT METHODS	Presentation of a project work and oral discussion. The project work will be made by each student as a paper/a short essay, will include data analysis and will be carried out relating to a topic given by the professor or chosen by the student. In the latter case, the topic will be agreed with the professor. The project will be delivered to the professor at least five days before the exam. The oral assessment will ascertain knowledge and skills in the field of study. Questions will be addressed to assess: a) knowledge and understanding, b) cognitive and practical skills, c) ability to communicate, d) making judgements. Marks will be given in thirtieths with possible honours. The project work is 30% of the total mark; the mark given through oral discussion is 70% of the total mark. Assessment scale: 1) 30 - 30 cum laude indicate respectively just some or all of the following features: a) advanced knowledge in the field of study, involving a critical understanding of theories and principles; b) advanced skills, demonstrating mastery and innovation required to solve complex and unpredictable problems in the field of study; c) fully adequate use of specialized language; d) responsibility for completion of tasks. 2) 26-29 indicate just one or more of the following features: a) comprehensive, specialised knowledge within the field of study and awareness of the boundaries of that knowledge; b) comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems; c) comprehensive use of specialized language; d) clear ability of organising study activities. 3) 22 - 25 indicate just one or more of the following features: a) knowledge of facts, principles, processes and general concepts, in the field of study; b) skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information; c) ability of using specialized language; d) ability of taking responsibility for completion of tasks. 4) 18-21 indicate just one or more of the following features: a) basic general knowledge; b) basic skills required to carry out simple tasks; c) basic ability of communicating relevant information; d) basic ability of taking responsibility for completion of tasks. 5) 0-17 indicate just one or more of the following features: a) insufficient general knowledge; b) insufficient skills required to carry out simple tasks; c) insufficient ability of communicating relevant information; d) insufficient ability of taking responsibility for completion of tasks.
EDUCATIONAL OBJECTIVES	The aim of this module is to provide students with statistical methodology and technical skills necessary to: a) build elementary and composite indicators in the socio-economic field; b) interpret and properly use main socio-economic indicators reported in the official reports issued by the European Union, international organizations and major non-governmental organizations; c) understand the main composite development indicators from international literature, in the area of cooperation, development, and migration. Teaching methods aim at stimulating both individual and group problem solving and the ability of building and using development indicators. At the end of the course, students are expected to possess the mathematical and statistical ability of combining variables of different nature in order to construct a quantitative measure of the target phenomenon. Students are also expected to know how to operate comparisons between countries and between individuals using composite indicators. Finally, students are expected: a) to acquire discriminating judgment and statistical abilities of selecting the most suitable instrument and data to measure complex concepts; b) to gain skills to read and interpret

	statistical socio-economic indicators presented by the main international organizations and by scholars involved in the field of cooperaton, development and migrations.
TEACHING METHODS	Lectures. Practical exercises, also at IT suite. Analyses of case studies, teamwork. In case of COVID-19 health emergency persistence, lessons will be given at distance.
SUGGESTED BIBLIOGRAPHY	Rispetto al programma di studio, non si opererà distinzione tra la condizione di studente frequentante e studente non frequentante. (There is no difference between attending or non-attending students relating to the study program). 1) Borra S., Di Ciaccio, A. (2021) Statistica. Metodologie per le Scienze Economiche e Sociali, 4 Ed., Milano: McGraw-Hill (solo limitatamente agli argomenti del corso) 2) Nardo M., Saisana M., Saltelli A., Tarantola S., Hoffman A., Giovannini E. (2008) Handbook on Constructing Composite Indicators - Methodology and user guide, Paris: OECD (downloadable from: https://www.oecd.org/sdd/42495745.pdf); 3a) Human Development Report, New York: UNDP, anno 2021; 3b) Human Development Report - Technical notes, New York: UNDP, anno 2021 (2a and 2b downloadable from: http://hdr.undp.org/en). Ulteriori materiali didattici di sintesi saranno forniti dal docente e inseriti nella sezione "Materiali del corso" all'interno del sito di Ateneo. Supplementary materials will be provided by the teacher. They will be uploaded into the section "Class materials" within the University of Palermo website.

SYLLABUS

Hrs	Frontal teaching
2	Quantification in the Social sciences. Units and variables. The construction of variables. Measurement scales.
3	Univariate statistical distributions: frequency distributions. Charts.
3	Measures of central tendency: the mode, the median and quartiles, the arithmetic mean. Variability, dispersion. Measures of variability: range, interquartile range, standard deviation, variance. Heterogeneity: Gini's index.
1	Statistical ratios. Time series.
3	Introducing relations between two variables (existence, intensity, direction and shape). The scatterplot. Bivariate statistical distributions: crosstabs.
3	Relations between categorical variables. Measures of association: Pearson's X^2 statistic. The rank correlation: Spearman's rho. Relations between quantitative variables: correlation, regression.
3	Indicators as instruments for evaluating complex phenomena and socio-economic development.
2	Types of indicators. The properties of indicators
3	Comparing data: transformations (standardization and other transformations)
3	Synthesising indicators: choice of the aggregation function and the weighting scheme
4	The Human Development Index (HDI); modifications and proposals of other measures

Hrs	Practice
3	Constructing composite indicators. Examples and applications
4	Case studies. Use of softwares

Hrs	Others
3	Project work on constructing a composite indicator