UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze della Terra e del Mare
ACADEMIC YEAR	2021/2022
BACHELOR'S DEGREE (BSC)	NATURAL AND ENVIRONMENTAL SCIENCE
SUBJECT	PHYSICAL GEOGRAPHY
TYPE OF EDUCATIONAL ACTIVITY	A
AMBIT	50176-Discipline naturalistiche
CODE	18787
SCIENTIFIC SECTOR(S)	GEO/04
HEAD PROFESSOR(S)	MADONIA GIULIANA Professore Associato Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	6
INDIVIDUAL STUDY (Hrs)	86
COURSE ACTIVITY (Hrs)	64
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	1
TERM (SEMESTER)	1° semester
ATTENDANCE	Not mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	**MADONIA GIULIANA** Tuesday 11:00 13:00 Studio docente - Via Archirafi n. 20, IV piano. Contattare preliminarmente il docente.Ulteriori o differenti incontri possono essere concordati tramite mail.

DOCENTE: Prof.ssa GIULIANA MADONIA

PREREQUISITES	Knowledge of the basic notions of Chemistry, Physics and Mathematics
LEARNING OUTCOMES	Knowledge and Understanding Acquisition of basic elements for understanding the physical environment. Acquisition of basic knowledge of the lithosphere - atmosphere - hydrosphere system. Knowledge and understanding of the main physical phenomena acting on the Earth surface and their geographical effects. Acquisition of tools for using, reading and interpreting topographic maps. Applying Knowledge and Understanding Ability to identify the main physical features of a natural environment. Ability to read and interpret topographic maps. Making Judgements Acquisition of skills and analysis tools for collecting and interpreting geographic data. Communication Ability to use a specific language peculiar to geographic disciplines. Capacity to interact and communicate, using appropriate language, with partners with different knowledge degrees. Learning Skills Acquiring tools and skills necessary for improving and updating the discipline. Ability to undertake with scientific and technical qualification, and high degree of autonomy further Earth Sciences studies.
ASSESSMENT METHODS	Evaluations during the course or oral examination; the grades are on a scale of 30. The evaluations during the course are two: the first one in mid-course and the second one at the end of the course and they consist of written tests. The final grade is the arithmetic mean of the grades (expressed as a grade of out of 30) of the two written tests. For those who do not pass these tests, or refuse the grade, or choose not to participate in the evaluations during the course, an oral exam is scheduled. Trough the written tests or the oral examination the student must prove to be able to know the basic knowledge of the lithosphere - atmosphere - hydrosphere system and the interactions between the different components. In addition, the student must demonstrate to be able: to read and use a topographic map.
EDUCATIONAL OBJECTIVES	The Physical Geography course aims to provide a basic knowledge of the lithosphere - atmosphere - hydrosphere system, and the main Earth surface processes. In addition, it aims to provide the tools for using, reading and interpretating topographic maps.
TEACHING METHODS	32 ore (4 CFU): lectures. 32 ore (2 CFU): laboratory activity. Compatible with the resources available to the Degree Course, some laboratory hours can be carried out as field activity.
SUGGESTED BIBLIOGRAPHY	GROTZINGER J.P., JORDAN T.H., 2016. Capire la Terra. Terza edizione italiana condotta sulla settima edizione americana. Parotto M., Lupia Palmieri E. (a cura di), Zanichelli. ISBN: 9788808821232 LUPIA PALMIERI E. & PAROTTO M., 2017. Il Globo terrestre e la sua evoluzione, ed. blu (seconda edizione). Zanichelli, Bologna. ISBN: 9788808328991 STRAHLER A. 2015. Fondamenti di geografia fisica - Zanichelli (Edizione italiana a cura di Elvio Lavagna e Guido Lucarno). ISBN: 9788808167545 ARUTA L. & MARESCALCHI P., 1988. Cartografia. Lettura delle carte. Flaccovio. ISBN: 88-7758-037-2

SYLLABUS

Hrs	Frontal teaching
1	Introduction and objectives of the discipline.
3	The Earth planet. The Earth in the Solar System. Kepler's Laws. Newton's Law. Shape and size of the Earth. Geographic coordinate system.
4	Motions of the Earth, geographical and climatic effects.
1	Orientation. Concept of Time and Time Zone
2	The moon and his motions. Moon phases. Eclipses. Tides.
3	Atmosphere and weather phenomena. Atmospheric composition. The layered atmosphere. Solar radiation and the planetary energy balance. Air temperature.
2	Atmospheric pressure and Winds.
3	Atmospheric humidity and precipitations. Global scale circulation of the Atmosphere
2	Weather and climate. Climate classifications and variations.
3	The lithosphere. Distribution of continents and oceans.
6	Hydrosphere. The hydrologic cycle. Salt water and fresh water.

SYLLABUS

Hrs	Frontal teaching
2	Physical geographical features of Sicily

Hrs	Workshops
4	The representation of the Earth. Cartographic representations. The scale of geographic maps. Cartographic projections. Types of geographic maps. The official Italian cartography IGM "La carta Topografica d'Italia".
4	Exercises on topographic maps. Map scale. Contour lines. Position and elevation of points. Distance and orientation.
5	Geographic coordinates. UTM coordinates.
5	Topographic profile
4	Delimitation of a drainage basin: drainage system, water divide.
4	Reading topographic maps
6	Field activity compatible with the available resources of the Course.