
COURSE: Terrestrial Physics

ACADEMIC YEAR: 2018-2019

TYPE OF EDUCATIONAL ACTIVITY: basic class

TEACHER: Marianna Balasco

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website: scienze.unibas.it/site/home.html.

phone: 0971 427401

mobile (optional): 328 4273717

Language: Italian

ECTS: 8 (6 lessons e
2 tutorials/practice)n. of hours: 72
(48 lessons and 24
tutorials/practice)Campus: **Potenza**
Dept./School: **Science Department**
Program:Semester: I
(**01.10.2019 -20.12.2019**
/20.01.2020)

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course deals with the study of the structure of the Earth system and of the rocks that compose it. Topics related to seismology, gravimetry, rheology of rocks, terrestrial magnetism and heat flow will be addressed with particular reference to the study of physical parameters.

The training objectives are pursued through the discussion of methods of analysis and interpretation of geophysical data. The methods will be applied to several practical examples, referring to the evaluation of natural risk as gravitational, seismic, and volcanic phenomena.

PRE-REQUIREMENTS

Basic knowledge of mathematics and physics.

General knowledge of geology

SYLLABUS

- Introduction to the course
 - Rheology
 - Seismology and internal structure of the Earth.
 - Planet Earth: Geodynamics and plate tectonics.
 - Earth magnetism paleomagnetism
 - Geothermal
 - Gravimetry
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TEACHING METHODS

Lectures (N. hours): 48

Classroom exercises (N. hours): 24

EVALUATION METHODS

Oral exam on all the contents of the course

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- Notes provided by the teacher.

Reference texts:

- Lay, Terry C. Wallace - Modern Global Seismology.
 - Lillie R. - Whole Earth Geophysics.
 - Lowrie W. - Fundamental of Geophysics.
 - Fowler C.M.R. - The Solid Earth: An Introduction to Global Geophysics.
 - Turcotte D.L., Schubert G. - Geodynamics.
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INTERACTION WITH STUDENTS

The program of the course, the objectives and the method of verification will be presented to the students.

Teaching material will be provided to students. the time and place of receipt will be defined in agreement with students.

EXAMINATION SESSIONS (FORECAST)¹

10-feb-2020, 02-mar-2020, 03-jun-2020, 06-jul-2020, 14-sept-2020 12-oct-2020 9-dec-2020

SEMINARS BY EXTERNAL EXPERTS YES X NO

¹Subject to possible changes: check the web site of the Teacher or the Department/School for updates.

