



UNIVERSITÀ
degli STUDI
di CATANIA

DEPARTMENT OF BIOLOGICAL, GEOLOGICAL AND
ENVIRONMENTAL SCIENCES
Bachelor's Degree in Geological Sciences
Academic Year 2017/2018 - 2° Year

GEOPHYSICS

GEO/10 - 9 CFU - 1° Semester

Teaching Staff

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DETAILED COURSE CONTENT

SEISMOLOGY

Seismic waves. Snell's law. Huygens law.

Elastic parameters: Young and rigidity moduli; Poisson coefficient. Velocity of seismic waves.

Domocrones. Structure of the Earth's inner.

Simplified epicentral locations.

Fourier Transform.

The general equation of seismometry

The electromagnetic seismometer.

Magnitude.

Gutenberg-Richter's law.

GRAVIMETRY

Earth gravimetric field.

Absolute and relative gravimetric measurements.

Linear and astatic gravimeters;

Corrections to gravity measurements.

Gravimetric anomalies.

GEOMAGNETISM

Intensity of the magnetic field; magnetic potential; magnetic moment.

Field of a magnetic dipole. Variation of the magnetic field, isoclines e isogones.

Paleomagnetism.

Origine of the geomagnetic field terrestre.

The magnetic isteresis.

TEXTBOOK INFORMATION

Gasparini e Mantovani - Liguori Editore
