

PhD Program in Science and Technology for Physics and Geology

Coordinator: Prof. Giovanni Carlotti– e-mail: giovanni.carlotti@unipg.it

Department of Physics and Geology

This PhD Course derives from the collaboration of professors and researchers belonging to the Department of Physics and Geology, as well as to national research organization, such as INFN, CNR and INGV. They are active in the Physics and Geology fields and share several methodologies and research themes. Particularly relevant are studies on the cosmic radiation and astroparticles, nuclear and elementary particle physics, condensed matter properties, cosmo-chemistry and geo-chemistry of the solar system bodies, the nuclear dating of meteorites and rocks, the dynamics of earthquakes and of landslides, the magma genesis and volcanic eruptions. The main aim is to form specialists with a high scientific profile, who can operate in an interdisciplinary team, linking modern approaches to a solid basic culture. Their future perspectives are in both basic and applied research, as well as in industry. The PhD is articulated in two curricula, namely Physics and Geology.

The curriculum in Physics includes both theoretical and experimental research performed in collaboration with international organizations (such as CERN, ESA, ESO and NASA), focused on fundamental interactions, particle and astroparticle physics, and nuclear interactions. Moreover, the curriculum comprises education and research in condensed matter and solid state physics, as well as in biophysics and nanoscience.

The curriculum in Geology includes studies on the main constituents of the earth (minerals, rocks, fossils), on the magmatic, geomorphologic, sedimentologic and tectonic processes. Moreover, it includes researches in engineering geology, hydrogeology, seismology, and volcanic risks as well studies that aim at localizing and exploiting geologic resources such as water, hydrocarbons, geomaterials.

A list of present and past specific research topics can be found in the website of the Course. Please visit: <http://www.fisgeo.unipg.it/fisgejo/index.php/it/phd.html>