



Visiting Professor Program Academic Year 2023/2024

TEACHING COMMITMENT: 16 hours

COURSE TITLE

Structural and Applied Geology and the Caledonian orogen

TEACHING PERIOD

2nd term

SCIENTIFIC AREA

Earth Sciences

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

Ductile and brittle shear zones; kinematic indicators at the microscale.

Vorticity of the flow.

Flanking folds and flanking structures.

Classification of fault rocks at the meso- and micro-scale.

Deformation and kinematics of the flow in shear zones in different geodynamic setting.

Shear zones in collisional orogens and their tectonic consequences

LEARNING OBJECTIVES

The course provides in-depth knowledge of the geometry and kinematics of the ductile and brittle structures at meso-and microscale.

Knowledge of the main mechanisms of formation of the foliation, the lineations, brittle and ductile shear zones and faults; deformation mechanisms at the microscale. Knowledge of structural discontinuities and their use application to the stability of the rock slope.

Topics addressed in this course are integral part in the educational targets related to the Master's degree, specifically for the different aspects of the applied structural geology. The focus is paid on the wide spectrum of techniques, typical of structural geology, which are fundamental tools for the description and reconstruction of geological and geological-structural models.

TUTORSHIP ACTIVITIES

N/A

LAB ACTIVITIES

N/A

OTHER ACTIVITIES BESIDES THE COURSE

Three hours will be devoted to seminars addressed to PhD students.

ADDITIONAL COURSE

COURSE TITLE

Orogenesis

TEACHING PERIOD

2nd term

SCIENTIFIC AREA

Earth Sciences

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

Large hot orogens and small cold orogens. Examples of the tectonic and metamorphic evolution of the Caledonian Orogen in NW Europe..

LEARNING OBJECTIVES

The course aims at describing the general framework of tectonic plates giving rise to the Caledonian orogen in NW Europe and its tectonic and metamorphic evolution through time accross the whole Wilson cycle with special focus on the mechanism of exhumation of deep seated rocks.

TUTORSHIP ACTIVITIES

N/D

LAB ACTIVITIES

N/D

OTHER ACTIVITIES BESIDES THE COURSE

N/D

VISITING PROFESSOR PROFILE

Expert in structural geology and tectonics and their applications. Competences on the global tectonics, as well as, on the regional geology of the Caledonian orogen, with a particular focus on exhumation mechanisms of deep seated rocks. The Visiting Professor should also possess experience in multi-disciplinary approach to solve tectonic problems. It will be greatly appreciated that the Visiting Professor adds his expertise in the reconstruction of the geological and tectono-metamorphic evolution of collisional orogens.

CONTACT REFERENT

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