Visiting Professors
Academic year 2018/2019

2nd term

COURSE TITLE
Facies analysis

Scientific area
Sedimentary geology and sedimentology

Department of Earth Sciences

Language used to teach
English

Teaching Commitment: 12 hours

Course summary
Principles of facies analysis: facies, facies association, facies model, depositional system. Walther’s rule and sedimentary cycles.
The main siliciclastic depositional systems: continental alluvial systems: braided and meandering rivers; shelf systems: backshore, shoreface, foreshore, offshore; slope and turbidite systems: deep sea fans, mud- and sand dominated turbidite currents. Field excursion on clastic depositional systems in the Northern Apennines (3 days).

Learning objectives
This course aims at providing the theoretical and practical principles of facies analysis and show an overview of the main clastic and carbonate depositional systems including both clastic systems and marine carbonate systems. More in particular key objectives are:
- know the principles which govern the geometry of sedimentary bodies and their lateral-vertical relationships.
- describe a sedimentary succession observed in outcrop or in a core in term of facies and facies associations and interpret in terms of depositional processes and environments.

Other activities besides the course: i.e. seminars and conferences addressed to PhD students and research fellows, dissemination conferences
One conference of about 1 hour addressed to PhD students and researchers about the applications of geomicrobiology and organic geochemistry to outstanding study cases of sedimentary successions deeply affected by microbial communities.
**Visiting Professor Profile**

Competences in Stratigraphy and Facies analysis, mainly focusing on marine carbonate depositional systems. It will be greatly appreciated that the Visiting Professor adds his expertise in the fields of geobiology, organic geochemistry, and isotope geochemistry to study in more detail the environmental and chemical conditions of carbonate formation, including microbial carbonate formation and diagenesis. The Visiting Professor should also possess a solid experience in laboratory activities, in order to highlight the advantages and problems of the applied geomicrobiological analytical techniques in carbonates.

**Contact person at the Department**

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