



Teach Mob – Visiting Professors Academic year 2017/2018

2 nd Term
COURSE TITLE Palaeontology
Scientific area Earth Sciences
Department of Earth Sciences
Language used to teach English
Teaching Commitment: 15 hours
Course summary The course describes the palaeontological record by defining the parameters of registration of the palaeobiological products in the sedimentary rocks, and analyses their implications for palaeoenvironmental reconstructions and relative time record. The course also aims to provide knowledge of the major invertebrate fossils useful in geology, their basic recognition, classification and chronostratigraphic significance of the major biological events in Earth's history, as recorded by fossils. The programme includes the following topics: Definition and principles. Researches history. Taphonomy, fossilization processes. The species concept, taxonomy, nomenclature rules. Division of marine environment. Limiting factors on the distribution of organisms. Taxonomy, palaeoecology and biostratigraphy of protists. Systematics and taxonomy of major invetebrate fissil groups, their ecological preferences and their practical identification. Evolutionary faunas and their significance for the geological record. Ichnology. Concepts of lithostratigraphy, biostratigraphy, magnetostratigraphy, isotopic stratigraphy. Chronostratigraphy and Geochronology. Biostratigraphic correlations. Main events of diversification and extinction. Fossil Lagerstätten. Biogeography and palaeobiogeography, main concepts and applications to plate tectonic and life evolution.
Learning objectives Analytical skills allowing the interpretation of the fossil record in stratigraphic and palaeoenvironmental studies. More in particular, key objectives are: <ul style="list-style-type: none">- arrange in chronological order the biological events and to interpret the role of the abiotic factors in the evolutionary processes;- identify the main groups of fossil invertebrates and their application in biostratigraphy and palaeoecology;- critically evaluate the qualitative constraints and the potentialities of the fossil record;- express orally or through technical-scientific reports the main points of the topics discussed during the course.
Other activities besides the course: i.e. seminars and conferences addressed to PhD students and research fellows, dissemination conferences Seminars specifically addressed to PhD students and related to 1) new methodologies applied to

palaeontological investigations and 2) article writing. At least one interdisciplinary dissemination conference open also to students of other courses and the general public.

Visiting Professor Profile

The expertise of the candidate should be in the fields of general palaeontology, systematic of invertebrates, palaeobiology, and palaeobiogeography. An excellent publication record is appreciated in order to provide first hand information on at least some of the topics of the course. Previous teaching experience at a University level to non-native English speakers is preferred.

Contact person at the Department

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