

GIS: TEACHING EXPERIENCE IN THE COURSE AT DIIAR POLITECNICO OF MILAN

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The President of ESAS is the Professor Roberto Schmid, which is the Chancellor of the University of Pavia, one of the most ancient university in Italy, the Director is the Professor GianPaolo Calvi of the University of Pavia, Faculty of Engineering, DIET

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KEY WORD: GIS, Survey, Cultural Heritage, Teaching Experience.

ABSTRACT

The research here related is the result of the Cooperation of the DIIAR Department of the Politecnico of Milan to the European School of Advanced Studies, ESAS : in the Istituto Universitario di Studi Superiori in Pavia has been set up the ESAS, School of Excellence, in the Conservation of the Historical and Architectonic Heritage (CPSA)¹.

The course has been organized for the first year in 500 hours lesson and 200 practical lesson (full time). At the Course are admitted graduated students in Architecture, in Engineering, and Humanistic Science which want to increase their knowledge and which want to work in the field of the Conservation of the Cultural and Historical Heritage; but the Course is also offered to graduated professional man and woman, to whom in the Public Administration (from local government, municipality, province, region, to national government, Ministerial Offices of Cultural Heritage, Local Monuments and Fine Arts Offices) attend at the conservation and environmental protection and want to specialize themselves in the disciplines involved in the intervention on the territory and on the architectural manufacts. The ESAS took place in the DIET Department of the University of Pavia.

The School is particularly focused on the methodology of survey and management of qualitative, descriptive and quantitative data which come from the different analysis carried out on the manufacts: among the subjects there is the topographic survey, photogrammetric survey of the architecture, Cad to support the representation and 3D modelling of the objects, Geographic Information System for the Cultural Heritage, integrated survey methodologies and not destructive analysis, Cataloguing of the Cultural Heritage.

The works here presented are the result of the teaching and of the Stage (two months) which took place in the DIIAR Department: the works are reproduced on a CD support and has been exposed in the closing ceremony. The activity of the students during this period has been focused on the survey and representation of the Castello Visconteo of Pavia. The topics are divided in two fields: the first field is represented by the survey and representation, the related subjects are the topographic project and survey of networks to support the different phases of a survey, the use of lot of the advanced methodology and technology, topographic survey of vertical section and surfaces of the manufacts with total station no prism, the data acquisition to support digital photogrammetric restitution (photogrammetric takens acquired by metric and semimetric cameras, and not calibrated cameras, digital and not), the data processing (photogrammetric restitution, simplified methodology of survey). The second is the data management to support the phases of the project of conservation and of the Cataloguing of the monuments or objects in the museum: it has been used GIS technology to support both these fields applied from the architectural scale (to support the analysis of the material, the analysis of the degree, the metric computation of the intervention, the verify of the standard limits admitted by the law in the re-use project,...) to the urban scale to support the production of the map of the risk of the Cultural, Architectonic Heritage.