

EDICULA NTUA MSc “Protection of Monuments” Reformation

It concerns the Optional Course 3.8 that is shown in the tables below. Following are the lectures that the NTUA MSc Students attended during the spring semester of 2022-2023 at NTUA in English.

NTUA Original Course	EDICULA Reformation
<p>3.8 Interdisciplinary documentation, diagnosis, revealing and protection of cultural heritage towards sustainable development</p> <p>7 ECTS</p>	<p>Reformed Course 3.8 Digital, interdisciplinary documentation, diagnosis and sustainable preservation of Cultural Heritage under risk - The rehabilitation of the Holy Aedicule of the Holy Sepulchre in Jerusalem as a pilot</p> <p>7 ECTS</p>
<p>Strategies for the sustainable preservation of cultural heritage. Interdisciplinary scientific support on decision making. Special interdisciplinary projects (Holy Aedicule in Jerusalem, Historic Building of Villa Klonaridi in Athens, Ancient Temple of Hephaestus in Athens Agora, etc.)</p>	<p>3D Digital reconstruction of CH acts as a core space of interdisciplinary synthesis of diverse results relative to different scientific disciplines (architecture, civil engineering, material science and engineering etc.), inclusive cultural heritage in Europe through 3D semantic modelling is presented through various demonstration cases. This approach is presented and examined in theory and in principle and is applied in the emblematic case of the rehabilitation of the Holy Sepulcher.</p>

3.8

3.8.1 Digital Preservation of Cultural Heritage

1. A. Amditis Research & Development Director, Institute of Communication & Computer Systems, (ICCS) of the National Technical University of Athens NTUA
2. K. Papadaki, K. Siountri, A. Vassi, E. Bakoyanni, The related policy of management of the national building stock through BIM technology and digital tools
3. R. Di Giulio, 3D DIGITISATION & EUROPEAN DATA SPACE FOR CULTURAL HERITAGE, 4HC
4. Prof. I. Foudos, Department of Computer Science and Engineering, University of Ioannina, Computer Graphics Research Group
5. From survey_to_HBIM_for_documentation
6. Giakoumaki, V. Piñon, M. Andrianakis, K. Hatzigiannakis, K. Melessanaki, M. Pavlou, S. Korosis, P. Pouli Development of a portable, hybrid analytical

instrument combining LED-Induced Fluorescence, Laser-Induced Breakdown Spectroscopy and Diffuse Reflectance for an integrated analysis of materials on monuments and objects of archaeological interest

7. Prof. Emer. A. Moropoulou, Dr. E. Tsilimantou, Mr. A. Giannikouris, Mr Stavros Otheitis, INCEPTION PROJECT NTUA DEMONSTRATION CASES - Interdisciplinary data management and future perspectives
8. Prof. Emer. A. Moropoulou, "Towards an INCEPTION (Inclusive Cultural Heritage in Europe through 3D semantic modelling) HBIM creation"
9. Prof. A. Georgopoulos , Asst. Prof. K. Lampropoulos, 3Dimensional geometric documentation of the Holy Aedicule and the RESPECT open access data platform A challenge for EDICULA

3.8.2 Rehabilitation of the Holy Aedicule of the Holy Sepulcher in Jerusalem

1. Prof. Emer. A. Moropoulou, The innovation and challenges of the rehabilitation of the Holy Aedicule of the Holy Sepulchre – Scientific supervision
2. Prof. Emer.M. Korres, Architectural documentation of the Holy Aedicule in the open city of Jerusalem
3. Prof. A. Georgopoulos, Prof. G. Pantazis, S. Tapeinaki, R. Chliverou, Dynamic integrated geometric documentation of the monument before, during and after the rehabilitation. Geometric documentation, network setup, structural health monitoring, data collection, photography and laser scanning, parameters for correct photography, monitoring of deformations, data processing, computational photography
4. Asst. Prof. K. Lampropoulos, Prof. A. Moropoulou, The structural evolution of the Holy Aedicule. Non destructive prospection of its Past and the Built Environment.
5. Dr. E. Delegou, Prof. A. Moropoulou, Characterization, archaeometry, archaeogene of building materials of the Holy Aedicule – Compatibility of conservation interventions
6. Dr. M. Apostolopoulou, Dr. E. Aggelakopoulou, Ass. Prof. A. Bakolas, Prof. A. Moropoulou, Historic mortars study – Design and use of compatible restoration mortars at the Holy Aedicule rehabilitation
7. Prof. C. Spyrakos, Dr. Ch. Maniatakis, Assessment of the structural response of the monument under static and seismic loads

Ass. Prof. Ch. Mouzakis, In situ evaluation and implementation of retrofit and strengthening measures of the monument – Construction site management

Em. Alexakis, Ass. Prof. D. Kyriazis, Ass. Prof. A. Doulamis, Dr. K. Lampropoulos, Prof. A. Moropoulou, An exemplary information system and methodology for the integrated management, analysis and dissemination of digital cultural heritage data coming from the rehabilitation of the Holy Aedicule

Dr. M. Karoglou, Prof. A. Moropoulou, Monitoring system for the sustainability of the monument. Monitoring air and materials thermohygrometric characteristics.

N. Moropoulos, Governance and Management of the Holy Edicule Rehabilitation Project