ARCHAEOLOGICAL SITES: CONSERVATION AND MAINTENANCE

Course Description
Recently, there has been a greater demand for architectural conservators at archaeological sites. As archaeologists become increasingly aware of their ethical responsibility to conserve not only the objects destined for museums, but also the actual architectural remains uncovered, the need for this type of expertise is acutely felt. At present, the in situ conservation of exposed ruins is left mostly unaddressed, and the vast majority of excavated sites continue to be neglected.

The obvious profession to meet this new demand is that of the architectural conservator. However, other professions, such as archaeologists, architects and planners, are often found intervening in the preservation of sites, and therefore, could use some fundamental knowledge of their conservation needs. Most programs in historic preservation deal with the conservation of historic buildings (structures which can be re-inhabited) as opposed to the stabilization of antiquities (roofless structures). The first part of this course will look at the philosophical and ethical differences between the two, while reviewing the international organizations and charters which have been set up for this purpose. Evaluation of site significance will be discussed, as well as methods of site interpretation.

The second part of the course will deal with basic techniques of conservation including site improvements, recording methods, reburial, consolidation, protection, sheltering, materials analysis, and state of the art technology applicable to archaeological sites. The final portion of the course will review the conservation of specific materials not addressed in other courses but often found in archaeological ruins. These include earthen construction, mosaics and wall paintings. Several guest lecturers are planned.

In addition to the lecture readings, the course requirements will include class field trips to evaluate an architectural ruin in the New York area. This will develop into the term project involving a midterm condition assessment report, and proposals by students for the stabilization, interpretation and presentation of the site for the final exam.

Syllabus
Class 1: Archaeological sites: ethics and philosophy of intervention.

1/23/06 Analysis of the differences between the restoration/reconstruction of historic buildings versus the conservation and/or anastylosis of ruins. Discussion of the Athens, Venice and Burra Charters. Review of international organizations which deal with cultural properties such as UNESCO, ICCROM, ICOMOS, World Heritage Committee, Getty Conservation Institute, World Monuments Fund.

Case studies: Acropolis, Athens; Knossos, Crete and Lemba, Cyprus.
Class 2: Site visit: New York area architectural ruin.

1/30/06 Preliminary review and survey of the site to be the class term project. Meet at 110th Street and Adam Clayton Powell Boulevard (7th Avenue)

Class 3: Site management: the impact of exposure.

2/6/06 The effects of disinterment and the results of intervention. The causes of deterioration. Evaluation of site significance and the reasons for exposure. Assessment of the availability of infrastructure and the impact of cultural tourism. Planning for the management and maintenance program of the site.

Case studies: Mochlos, Crete; Byblos, Lebanon; Pachacamac and Pisac, Peru.

Class 4: Condition assessment: the importance of archival records.

2/13/06 Condition survey. Techniques used to accurately survey and record archaeological remains such as a theodolite, plumb bob, tape measure, photography and video, computerized documentation. Review of the various methods of excavating sites including the British system of quadrants. Review of existing records. Standardization of information and recording methods. Evaluation of seismic risk and structural integrity. Site monitoring.

Case study: Palaikastro, Crete.
Guest speaker: James Conlon, Columbia University’s Visual Media Center

Class 5: Basic improvements to the site: stabilization and presentation.


Case studies: Palace of Sayri Tupac, Peru and Aghia Irini, Kea.

Class 6: Materials analysis: characterization.

2/27/06 Methods of identifying physical and chemical characteristics. the use of microscopy and advanced analytical equipment. Qualitative and quantitative analyses of salts. Petrography. Microchemical spot tests. Solvents.
Guest lecturer: Prof. Norman Weiss, Columbia University’s GSAPP.

Class 8: Exposed masonry: consolidation and protection. Midterm due.

3/6/06 The differences between hydraulic and non-hydraulic mortars. Review of mortar materials including pozzolans such as pumice, brick dust, fly ash, and binders like lime and cement. Methods of improving hydrated lime. The various forms of masonry capping. Modification of mortars by chemical additives such as latex and acrylic resins. Effects of rising damp and the installation of moisture barriers. Use of chemical consolidants.

Case studies: Mytilene, Lesvos; Palaikastro, Crete and Chersonesos, Crimea.

Class 9: Protection by sheltering: “appropriate technologies.”

3/20/06 Macroclimates and microclimates. Temporary and permanent shelters. The morphology of shelter design: should it allude to the original structure? Criteria for selecting construction materials for shelters and the availability of non-conventional materials such as aerotextiles. Hi-tech versus lo-tech and maintenance requirements.

Case studies: Conimbriga, Portugal; Temple of Wiracocha, Peru and Mallia, Crete.

Class 10: Site visit: New York area architectural ruin.

3/27/06 Further review of the site for the class term project.

Class 7: Conservation techniques: reburial.

4/3/06 Reasons for backfilling. Differences between backfilling and capping of a site.

4/4/06, 6:00 Reasons for partial or temporary backfilling. The use of geotextiles, horizon markers, spoil heap, sand, gravel. Installation of monitoring systems.

Case studies: Chaco Canyon, NM and Laetoli Footprints, Tanzania.
Guest speakers: Dr. Martha Demas and Dr. Neville Agnew, Getty Conservation Institute.

Class 11: Conservation of specific materials: earthen architecture (part 1).

4/10/06 Description of the various kinds of earthen architectural construction. Physical properties of soils including granulometric analysis, plastic and liquid limits,

Case studies: Maroni-Vournes, Cyprus and Túcume, Peru.

Class 12: Conservation of specific materials: earthen architecture (part 2).


Case studies: Peru. 
Guest speaker: John Hurd, Global Heritage Fund.


Case studies: prehistoric southwest and Catal Hüyük, Turkey. 
Guest speaker: Constance Silver, Preservar.

Class 14: Conservation of specific materials: mosaics.


Case study: Paphos, Cyprus. 
Guest speaker: Jerry Podany, J. Paul Getty Museum.

Exams: Student presentations. Final report due.
5/8/06