School of Architecture and Built Environment

Department of

Architectural Conservation

Study Plan

Masters of Science Program in Architectural Conservation

2012

Masters of Science Program in Architectural Conservation

Introduction

The diversity of the cultural resources of Jordan and the region is represented by historic monuments, towns and villages, and urban and cultural landscapes that contain thousands of old and heritage buildings from different periods and context that pertain important historical, social, aesthetical, religious and cultural values and significance. These buildings represent a dilemma both to their owners and to the government because the numbers of specialists who can deal with them are insufficient, and because there are no national rules or guidelines for dealing with them.

Therefore, there is a dire need to prepare specialists who can fulfill the gap between the needs of the society to preserve it's built heritage and all the values associated with that and the needs of the owners who would need to add functional value to their properties. Currently, municipalities can't prevent the demolition of heritage buildings, because law number 5/2005 concerning preservation and management of heritage buildings is not being implemented, and if there is a will to implement it, there is no rules or guidelines for how to deal with such situations. Thus, untrained architects or even uneducated contractors do the conservation work with little or no understanding of the technical or ethical issues that should underpin how such work is carried out.

The proposed program is designed to prepare well qualified specialists who will be able to fulfill this missing function, and will increase awareness with fellow architects

and the public about the importance of these sites and buildings and the need to conserve and use them in a sustainable fashion.

Program Objectives

The Architectural Conservation Program provides knowledge and understanding of architectural conservation, along with practical conservation skills to preserve buildings and heritage sites. Students with high school certificate/ scientific stream and bachelors degrees in architecture, interior design, cultural resources management, civil engineering, archaeology, or spatial urban planning can enroll in the program. It aims:

1. To develop an understanding of the attitudes and philosophies which underpin conservation.
2. To develop skills in observation, recording, documentation, analysis, understanding and evaluation of historic buildings and places so that students become more knowledgeable of, and sensitive to the built environment.
3. To develop skills to judge better the nature of required interventions and to increase the awareness of the appropriate professionals.
4. To be able to implement hands-on techniques in documentation, maintenance and repair.
5. To generate research and practicebased knowledge of relevance to architectural conservation; archaeological background; policy and practice within the work settings and/or the wider community.
6. To understand structural and material aspects of conservation: building materials, deterioration processes and repair materials.

Learning Outcomes

1. Key knowledge

Architectural Conservation Program graduates will develop an understanding of the evolution of conservation approaches and theories regarding the built environment and the multi-disciplinary nature of the practice of conservation. They will be able to understand, interpret, explain, analyze, assess and implement various conservation concepts and techniques within historic and archaeological settings...

Assessments

Student achievement of this learning outcome is assessed:

1. [Directly] by evaluating M.Sc. Theses to assure that they reflect students' overall work in the program.

2. [Indirectly] by senior surveys and by program review data and job placement rates.

2. Skills

a. Graduates will be able to plan, evaluate, and implement projects related to conservation of the built environment

Assessments

Student achievement of this learning outcome is assessed:

1. [Directly] by reviewing samples of student work (research papers and analysis projects).

2. [Indirectly] by employer surveys.

b. Graduates will be able to undertake and investigate various research areas related to architectural conservation.

Assessments

Student achievement of this learning outcome is assessed:

1. [Directly] by reviewing samples of student work (working and research papers).

2. [Indirectly] by employer surveys.

3. Values

Architectural Conservation Program graduates will be able to assess their own strengths and weaknesses and adjust future performance in light of self-assessments.

Assessments

Student achievement of this learning outcome is assessed:

1. [Directly] by instructor evaluations.

2. [Indirectly] by student self-assessments and acceptance into leading Ph. D. programs.

Curriculum for Masters of Science Degree in Architectural Conservation

Classification	Credit Hours
Prerequisite Requirements	**3**
Compulsory Requirements	**18**
Elective Requirements	**9**
Master's Thesis	**9**
Total	**39**

1. Prerequisite Requirements (3 Credit Hours):

Course No.	Course Title	Cr. hrs.	Lecture	Lab	Prerequisite
AC429	History of the Built Environment in Jordan and the Fertile Crescent	3	3	0	-
	Total	**3**			

2. Compulsory Requirements (18 Credit Hours):

Course No.	Course Title	Cr. hrs.	Lecture	Lab	Prerequisite
AC710	Conservation in the Field/ Internship	3	1	6	AC752
AC721	Conservation Theory, Philosophy and Practice	3	3	0	-
AC751	Heritage Documentation and Surveys	3	2	3	-
AC752	Building Pathology and Diagnosis	3	2	3	AC751
AC753	Preventive and Remedial Conservation	3	3	0	AC752
SABE721	Research and Presentation Skills	2	2	0	-
SABE722	Technical Writing Skills	1	1	0	SABE721
	Total	**18**			

3. Elective Requirements (9 Credit Hours) to be chosen from:

Course No.	Course Title	Cr. hrs.	Lecture	Lab	Prerequisite
AC701	Special Topics in Architectural Conservation	3	3	0	-
AC741	Conservation of Urban and Cultural Landscapes	3	3	0	
AC742	Adaptive Re-Use of Buildings	3	2	3	AC752
AC754	Conservation and Information Technology	3	2	3	AC751
AC781	Introduction to Cultural Site Management	3	3	0	AC721
AC782	Management of Conservation Projects	3	3	0	-
AC783	Conservation Legislations and Regulations	3	3	0	AC721
SP751	Appropriate Technology	3	3	0	SP 710 or AC710
SP783	Tourism Planning	3	3	0	SP720 or AC721
	Total Taken	**9**			

4. Thesis Requirements (9 Credit Hours):

Course No.	Course Title	Cr. hrs.	Lecture	Lab	Prerequisite
AC799 A	Master Thesis / Architectural Conservation	9	-	-	SABE722
AC799 B	Master Thesis / Architectural Conservation	0	-	-	SABE722
AC799 C	Master Thesis / Architectural Conservation	6	-	-	SABE722
AC799 D	Master Thesis / Architectural Conservation	3	-	-	SABE722
	Total Taken	**9**			

Course Code

The digits have the following representation:

The left digit represents the course level.

The middle digit represents the specialized field of knowledge of the course as follows:

0. Special Topics

1. Projects

2. Research Methodology, Theory and Society

4. Built Environment

5. Technology

8. Management

9. Masters Thesis

The right digit represents the sequence of the course within the field.

Study Plan Guide for the Masters of Science Degree in Architectural Conservation

First Year				
First Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
SABE721	Research and Presentation Skills	2	-	-
AC429	History of the Built Environment in Jordan and the Fertile Crescent	3	-	-
AC721	Conservation Theory, Philosophy and Practice	3	-	-
AC751	Heritage Documentation and Surveys	3	-	-
	Total	**11**		
Second Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
AC752	Building Pathology and Conservation Technology	3	AC751	-
AC000	Elective (1)	3	-	-
AC000	Elective (2)	3	-	-
	Total	**9**		

Second Year				
First Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
SABE722	Technical Writing Skills	1	SABE721	
AC710	Conservation in the Field/Internship	3	AC752	
AC753	Preventive and Remedial Conservation	3	AC752	
AC000	Elective (3)	3	-	-
	Total	**10**		
Second Semester				
Course No.	**Course Title**	**Cr. hrs.**	**Prerequisite**	**Co-requisite**
AC799	Master Thesis / Architectural Conservation	9	2nd. YEAR	-
	Total	**9**		

Courses Description

Masters of Science Program in Architectural Conservation

Courses Description

AC 429 History of the Built Environment in Jordan and the Fertile Crescent, 3 Crs.

This course aims to understand the evolution of socio-economic, spatial, architectural, and urban and rural environments within Jordan and the region concentrating on the recent past (last 250 years), with reference to the history of the earlier periods. The course also attempts to illustrate the significant contribution of the social sciences and archaeological research to a better understanding of the built environment. In its attempt to study the history of the built environment, the course philosophy rejects the concept of history as totalizing, and attempting to analyze moments of rarity and transformation in society, thus qualifying and granting voice to subjugated knowledge and realities, while uncovering mechanisms of hegemonic power and systemized control.

AC 701 Special Topics in Architectural Conservation, 3 Crs.

This course allows specialized or in-depth study of a supplementary subject in architectural conservation. Students' interests and instructor's expertise help determine the topic.

AC 710 Conservation in the Field / Internship, 3 Crs.

This training/ internship will be conducted at research institutions, international organizations offering internship or training, our German partners and may also include architectural firms specialized in conservation. Students will work on real heritage conservation projects which may include documentation, rehabilitation, and adaptive re-use of buildings and different levels of conservation in addition to being part of research teams investigating various issues of interest to conservationists. Furthermore, students could participate in planning projects and surveys that are related to heritage conservation/management.

AC 721 Conservation Theory, Philosophy and Practice, 3 Crs.

This course provides analysis of the historical background including the development of the theoretical scope of architectural conservation. It aims to discuss concepts and terms that determine the field of contemporary conservation. The course also provides a survey of history, philosophy, and approaches of conservation and rehabilitation of cultural heritage at the scale of buildings and monuments and at an integrated scale of conservation areas as well. The course also presents the diversity of actors and agents, including institutions that are involved in heritage conservation internationally, regionally and locally.

SABE 721 Research and Presentation Skills, 2 Crs.

This course provides students with theoretical and practical knowledge needed to write and present technical research papers. The course covers research norms, data collection tools and techniques, methods of evaluating information, data analysis techniques and data interpretation, quantitative (experimental, quasi-experimental, and survey) and qualitative studies (case studies, comparative analysis, field reconnaissance surveys, participant observation, and archival). The review includes all methods of observation and data collection with focus on measurements, reliability, validity, data analysis, interpretation, inferences, reporting, and research ethics.

SABE 722 Technical Writing Skills, 1 Crs.

This course provides students with theoretical and practical knowledge needed to write thesis proposals and final Master's Thesis. The course covers preparation for thesis writing, thesis management, proposal rewriting, conducting oral and visual presentations, and teaching and training didactics.

AC 741 Conservation of Urban and Cultural Landscapes, 3 Crs.

The course commences with a review of the progression of integrated conservation approaches worldwide, beginning single monument conservation and ending with conservation of whole areas and city cores. The course introduces different approaches and methodologies to urban conservation; including understanding the urban environment, conducting surveys and proposing different levels of intervention that are physical and non-physical in nature. The course also introduces the diversity of stakeholders involved in urban and cultural landscape conservation including local communities, guilds, commercial associations, owners, residents and local authorities (e.g. municipalities).

AC 742 Adaptive Re-Use of Buildings, 3 Crs.

The course concentrates on the processes of adaptive reuse of buildings into contemporary uses and functions. It introduces theories of adaptive reuse of heritage and contemporary buildings as a key factor in conservation. It further addresses design and planning with consideration of the entire life cycle of the building and its components in regard to ethics, economics, environmental impact, and performance. It also deals with methods of analysis of heritage buildings and settings in relation to cultural aspects, socio-economic impacts as well as market oriented trends.

AC 751 Heritage Documentation and Surveys, 3 Crs.

This course aims to convey a comprehensive meaning of cultural heritage documentation beyond the production of measured drawings for buildings and sites to include photography, historic and archival research; and conducting thematic surveys. The understanding of documentation Sites or historic buildings and Monuments needs to be based on the different categories/types and components of documentation taking into account the internationally agreed standards for the documentation of the cultural heritage. Photographic, graphic documentation and digital documentation

shall also be introduced . From hand survey, photogrammetry, to total station and up to photo modeler in addition to 3 d laser scanning applications shall be explored. Specific objectives include conveying thinking and analytical skills regarding documentation, such as identifying reasons and levels of surveys. The course also attempts to convey practical and technological skills including how to prepare for fieldwork and how to measure historic buildings, using conventional and advanced technologies. The course will depend on field projects to materialize such approaches.

AC 752 Building Pathology and Diagnosis, 3 Crs.

This course aims to provide information on the causes and agents of deterioration of historic buildings and building materials, documentation and classification of agents of deterioration based on international experience. The course addresses the subject of natural and anthropogenic causes of building deterioration reflected in disturbances and threats . Emphasis on building pathology, relevant documentation techniques leading to scientific diagnosis for the different reasons and technical aspects of deterioration will be made. Visual glossaries as part of the diagnostic features shall be explored based on work in the field. Lectures cover subsurface conditions, structural systems and related problems, wall and roof systems, and interior finishes, targeting performance, deterioration, and stabilization or intervention techniques.

AC 753 Preventive and Remedial Conservation, 3 Crs.

This course will explore techniques and approaches to preventive conservation, including investigation and testing on site and researching various approaches to characterize, identify weakness and possibilities of interventions that will maintain the structural stability and cultural and historic authenticity of the building. The course introduces the characteristics of the variety of materials such as masonry - stone, brick, mortars, metal , glass and possible compatible materials used in conservation and restoration projects, and includes hands-on laboratory and field work in addition to field experiments.

AC 754 Conservation and Information Technology and Management, 3 Crs.

The course investigates the implications of various information technologies on the practice of architectural and urban conservation. This course is concerned with the different methods for image-based 3D mapping and digital recording, visualization and heritage management, and Geographic Information System (GIS) applications in architectural and urban conservation and management. It introduces students to the various software packages in simulation to produce animated and digital reconstructions of buildings and sites.

AC 781 Management of Conservation Projects, 3 Crs.

In this course students will acquire knowledge and skills to develop, manage, and evaluate projects in the field of conservation and rehabilitation of cultural heritage. It also provides information for skill development in the process in relation to business and management, including strategic planning, business plan development, managing client relationships, financial and legal issues, quality control, and professional ethics.

This course also covers principles and methods of conservation and rehabilitation project management at the planning and implementation phases including execution of an interdisciplinary work program and budget, and establishment of a comprehensive organization covering all phases starting with the general assessment phase and ending with an effective guidelines for carrying out the implementation phase.

AC 782 Introduction to Cultural Site Management, 3 Crs.

This course is concerned with basic methods, theories and principles of cultural site management. The course illustrates the process of cultural site management starting from cultural heritage identification, assessment and interpretation, and response and monitoring. The course focuses on management, planning, and decision- making for all types of heritage sites ranging from individual buildings, to historic sites and to whole cultural landscapes. Course material will draw on model approaches to management as well as on a series of local and international case studies, with the goal of understanding the practicalities of site management. Particular topics to be examined in greater detail might include conservation policy and interpretation, tourism, and economic development strategies.

AC 783 Conservation Legislations and Regulations, 3 Crs.

This course lends information about various regulations, conventions, charters, and laws of conservation in order to develop an understanding of legal and administrative aspects in conservation; especially to the development of conservation thought and practices. By the end of the course, students will be familiar with the roles of the public and private organizations involved in conservation, and begin to analyze conservation policies. The course will also include review of legal and administrative aspects in conservation, examination of international regulations, charters, declarations and conventions, and a look at governmental and non-governmental organizations in Jordan and in the world.

SP 783 Tourism Planning, 3 Crs.

This course provides students with the appropriate understanding of the relationship between the built environment and the complexity of tourism activities, and its impact on society and resources allocation. It covers various processes in tourism planning and development including government involvement, local communities, NGOs, and public-private initiatives. It also presents various planning approaches including resource-based and community-based tourism. Field trips and field research will be utilized.

AC 799 Master Thesis / Architectural Conservation, 9 Crs.

This course involves extensive research in architectural conservation. The Master's Thesis is based on field research and demonstrates student's background knowledge. A defense will be set to evaluate student's capabilities of carrying out research, with a focus on the analysis and interpretation of skills gained.