German Jordanian University

School of Architecture and Built Environment

Department of Architecture and Interior Architecture

Master of Science In

ARCHITECTURAL CONSERVATION

Non-Thesis Track

Study Plan

Academic Year 2021/2022

Table of Contents

1. Introduction:

The diversity of the cultural resources of the region including Jordan is represented by historic monuments, towns and villages, 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. Such 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, mainly in the region, can't prevent the demolition of heritage buildings, because of the lack of an applicable regulatory framework concerning preservation and management of heritage buildings or there is no political support for any implementation. Thus, frequently untrained architects or even uneducated contractors conduct usually the conservation work with little or no understanding of the technical or ethical issues that should underpin how such work is carried out.

This program is designed to prepare well qualified specialists from the region including Jordan, 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.

2. 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 practice-based 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.

3. Learning Outcomes:

A. *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 passing the comprehensive exam of each specific major.
2. [Indirectly] by senior surveys and by program review data and job placement rates.

B. *Skills*

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 (working and research papers).
2. [Indirectly] by employer surveys.

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.

C. *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.

4. Enrolment:

- Bachelors' Degree, with minimum merit of GOOD, in a relevant field.
- English Proficiency Test with minimum scores as requested.
- To have a scientific major high school certificate.
- Admission interview.
- Portfolio that demonstrates projects undertaken during study and practice.
- Short Research Statement.
- Three Letters of Reference.
- CV. illustrating the applicants' qualifications and experiences.

5. Degree requirements:

Students must complete the following requirements to obtain the degree in Architectural Conservation:

Classification	Credit Hours
Compulsory Requirements	33
Elective Requirements	6
Internship	1
Comprehensive Exam	0
Total	**40**

6. Curriculum for Masters of Science Degree in Architectural Conservation

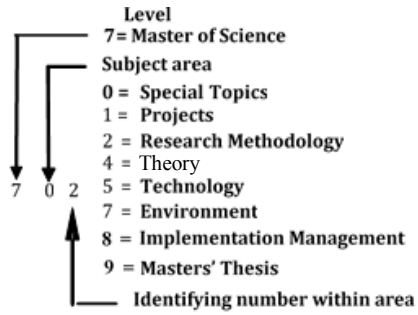
The digits have the following representation:

The Alpha digits - AC: Architectural Conservation

The left digit represents the course level.

The middle digit represents the specialized field of knowledge of the course

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



Compulsory Requirements (33 Credit Hours):

Course No.	Course Title	Cr. hrs.	Lecture	Lab	Prerequisite
AC748	Conservation, Theory and Practice	3	3	0	-
AC749	History of the Built Environment in the Region	3	3	0	-
AC755	Heritage Documentation & Survey 1	2	1	2	-
AC756	Building Pathology and Conservation Technology	3	1	4	-
AC757	Remedial Conservation and preventive approaches	3	3	0	AC756
SABE724	Research Methods	3	3	0	-
AC743	Conservation of Landscapes	2	2	0	AC748
AC746	Adaptive Re-Use Theories and practice	3	1	4	AC756
AC758	Information Technology, Documentation Techniques, Analysis and Survey 2	2	1	2	AC755
AC717	Conservation Management Project	3	1	4	AC756
SABE725	Professional Practice Skills	3	-	-	SABE724
AC718	Adaptive Reuse Master Project	3	-	-	AC756
AC799E	Comprehensive Exam	0	0	0	-
	Total	33			

Elective Requirements (6 Credit Hours) to be chosen from:

Course No.	Course Title	Cr. hrs.	Lecture	Lab	Prerequisite
AC703	Special Topics in Architectural & Urban Conservation	2	2	0	-
AC705	Special Topics in Conservation Practice	1	1	0	-
AC745	Conservation of World Heritage Sites	3	3	0	-
AC788	Post-Crises Conservation and Risk Preparedness and Management	3	3	0	AC748
AC759	Archeology of Architecture	3	3	0	AC755
SP783	Tourism Planning	3	3	0	AC748 or SP740
SP741	Theories and Concepts of Urbanism	3	3	0	AC748 or SP740
SP743	Landscape Urbanism	3	2	2	-
SP785	Project Management and Implementation	3	3	0	AC748 or SP780
SP751	Appropriate Technology	3	3	0	AC755 or SP 710
	Total Taken	6			

Internship requirements (1 Credit Hour)

Course No.	Course Title	Cr. hrs.	Lecture	Lab	Prerequisite
AC711	Conservation Internship	1	0	6	AC757

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

First Year:

First Semester:

Course No.	Course Title	Cr. hrs.	Prerequisite
SABE724	Research Methods	3	-
AC748	Conservation Theory and Practice	3	-
AC749	History of the Built Environment in the Region	3	-
AC755	Heritage Documentation and Survey 1	2	-
	Total	**11**	

Second Semester:

Course No.	Course Title	Cr. hrs.	Prerequisite
AC743	Conservation of Landscapes	2	AC748
AC756	Building Pathology and Conservation Technology	3	-
AC758	Information Technology, Documentation Techniques, Analysis and Survey 2	2	AC755
AC000	Elective (1)	3	-
	Total	**10**	

Summer Semester:

Course No.	Course Title	Cr. hrs.	Prerequisite
AC711	Conservation Internship	1	AC758

Second Year:

First Semester:

Course No.	Course Title	Cr. hrs.	Prerequisite
AC717	Conservation Management Project	3	AC756
AC757	Remedial Conservation and Preventive approaches	3	AC756
AC000	Elective (2)	3	-
	Total	9	

Second Semester:

Course No.	Course Title	Cr. hrs.	Prerequisite
SABE725	Professional Practice Skills	3	SABE724
AC746	Adaptive Re-Use Theories and practice	3	AC756
AC718	Adaptive Reuse Master Project	3	AC758
	Total	9	

Third Year (or Summer Semester of Second Year):

Course No.	Course Title	Cr. hrs.	Prerequisite
AC799E	Comprehensive Exam	0	All
	Total	0	

8. Description of Courses

Field 0: Special Topics

AC703 Special Topics in Architectural & Urban Conservation, 2 Crs

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

AC705 Special Topics in Conservation Practice, 1 Crs

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

Field 1: Projects

AC711 Conservation Internship, 1 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.

AC717 Conservation Management Project, 3 Crs

This course is concerned with basic methods, theories and principles of cultural site management and conservation management planning (CMP). The course illustrates the process of cultural site management starting from identification and documentation; assessment; and response where general policies and detailed strategies are made for the future protection, conservation, interpretation, and management of the site. The course is both theoretical and practical at the same times. Therefore, the students will apply the knowledge they gained in this class concerning conservation management planning, and also will apply the accumulated knowledge base gained during the previous semesters in a practical project targeting the conservation of our Jordanian cultural heritage sites (e.g., archaeological site, architectural heritage site, urban historic site, other) and will produce reports, drawings, and tender documents for such a project.

AC718 Adaptive Reuse Master project 3 Crs.

This course is a specialized conservation design studio on adaptive reuse of historic buildings into contemporary uses. The course introduces adaptive reuse as one of the various levels of intervention within architectural conservation and discusses related concepts and theories. Then, the studio will be based on identification and documenting of a particular case of an architectural heritage building prior to conducting needed physical and other assessments for the building in order to define the nature of its future adaptive reuse and transformation. The final product for the studio is both theoretical and practical in nature: it is theoretical in its various discussions on assessment and understanding of the place understudy; and it is practical in the way it requires conceptual and then detailed architectural/ conservation design/ drawings for the adaptive reuse at programmatic, spatial, and all other architectural levels.

Field 2: Theory and Society

SABE724 Research Methods, 3 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.

It also 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.

SABE725 Professional Practice Skills, 3 credits.

This course prepares the students to write assessment reports to a real case as discussed and approved by the course instructor. It could embody technical; appraisal reports as well as analytical report of a conservation project real case.

Field 4: Theory

AC748 Conservation, Theory 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.

AC749 History of the Built Environment in the Region, 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.

AC743 Conservation of Landscapes, 2 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).

AC745 Conservation of World Heritage Sites, 3 Crs

This course allows specialized or in–depth study of a world heritage site(s) from the, inscription criterion based on the Outstanding Universal Value (OUV), to tentative lists to planning for inscription process. It also allows to understand the challenges facing the conservation and management of WH sites in the Middle-East and the role of the different governmental agencies, local communities and Regional & International conservation communities and organizations. Students' interests and instructor's expertise help determine the topic.

AC746 Adaptive Re-Use theories and practices, 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. The course 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.

Field 5: Technology

AC755 Heritage Documentation and Survey 1, 2 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.

AC756 Building Pathology and Conservation Technology, 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.

AC757 Remedial Conservation and Preventive Approaches, 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.

AC758 Information Technology, Documentation Techniques, Analysis and Survey 2, 2 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 archaeological, 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.

AC759 Archeology of Architecture, 3 Crs

Archaeology of Architecture is the application of the archaeological methods & typo-morphological analysis to the study of historical buildings, following the principles of *Material Culture Archaeology*, understood as the *Science and Methods that studies Material Culture*, i.e.: the material remains of Culture. And also following typological and typo-morphological analysis of buildings and the urban form. The aim of this course is to introduce the student into the discipline of Archaeology of Architecture and its two main analytical tools: *Stratigraphy and Chrono-Typology*. Another objective of the course, is also to introduce to the student's concepts of building architectural typology, and typo-morphology. A historical building, from the archaeological point of view, is the result of a long chronological sequence of transformations and changes of use that can be identified and read using the methods of archaeology. The Historical Building is thus understood as a *pluri-stratified* and *pluri-typological* object. Each stratigraphic unit corresponds to a specific building phase of the historical building, while to each phase of the building (*stratum*) can be associated certain typological characteristics. This allows the archaeological method to be applied to a historical building as if it were an archaeological site. Furthermore, and from a typo-morphological perspective, a historic building is also the product of an evolving architectural typology, the intensions of its patrons, and its relationships with its setting.

Field 8: Implementation Management

AC788 Post-Crises Conservation and Risk Preparedness and Management, 3 Crs.

This course is an advance course in risk assessment & management where both qualitative and quantitative methods are applied to identify disturbances, threats, risks and agents of deterioration. Case studies applying some of the state of art methodologies shall be applied for both the movable and immovable cultural resources. Special attention shall be given for risks & conflicts in case of wars and the role of the different agencies and international treaties.

Field 9: Master's Thesis

AC 799E Comprehensive Exam, 0 credits.

After A successful completion of all core and elective courses with a minimum of cumulative average of 75%, students should be able to pass a comprehensive, four hours, exam. To pass, the student should have an overall grade of minimum 70%. The exam aims to measure the student's ability to understand and link the basic and advanced concepts they have learned throughout their study duration.

9. Tuition and fees

The following table gives a breakdown of tuition and fees at GJU:

Fees	Jordan Dinars
Credit hour fee	120
Other Fees	-
Admission/ Acceptance Fees	120
Refundable Collateral Fees	150
Registration Fees/ per semester	120
Computer Fees/ per semester	60
Medical Insurance Fees/ per semester	50

10. Contact information

For application and other enquiries, please contact:

P: +962-6-429-4444 ext. 4302

+962-6-429-4444 ext. 4801

URL: http://www.gju.edu.jo/