



University/Academy: Arab Academy for Science, Technology & Maritime Transport
Faculty/Institute: College of Engineering & Technology
Program: B.Sc. Architectural Engineering and Environmental Design

Form no. (12): Course Specification

1- Course Data

Course Code: AR 411	Course Title: Architectural Design & Urban Landscape* * For Construction and Building Eng. Department only.	Academic Year/Level: year / semester
Specialization: Architecture	No. of Instructional Units Credit 3 Lecture 2 Tutorial 4	Prerequisite None

2- Course Aim

This course is an introduction to the fundamentals of architectural design and landscape architecture for non-architectural students. It familiarizes students with the design process, the analysis of form and function, and the development of an architectural project. The course focuses on the role of the architect and urban planner in organizing space to fulfill different human needs and activities. It directs students with how to deal with different design problems through systematic design process, how to take into consideration different physical, cultural, and temporal factors. The course also introduces the landscape design process as one of the duties of the architect.

The course aims to:

- Assist the student to interact with different design problems through systematic design process
- Develop an understanding of the different techniques and ways to achieve an environmental approach.
- Emphasize an understanding of natural resources as water, and plant materials and man-made elements in landscape design and how to integrate it into an architectural project.

3- Intended Learning Outcomes

a- Knowledge and Understanding	Through knowledge and understanding, students will be able to: <ul style="list-style-type: none"> • Express and understand architectural design drawings. • Explain ideas and concepts through detailed architectural drawings. • Distinguish the form and function of different architectural elements. • Define the different techniques to achieve environmental designs.
b- Intellectual Skills	Through intellectual skills, students will be able to: <ul style="list-style-type: none"> • Determine the factors which influence the processes and delivery of architectural design and urban landscape. • Apply creative ideas and concepts that are appropriate and in accordance with the environmental and sustainable approaches by understanding the effect of architectural design and urban landscape in achieving the human comfort in the built environment and a sustainable design. • Analyze the different elements of an architectural or a landscape design project.
c- Professional Skills	Through professional and practical skills, students will be able to: <ul style="list-style-type: none"> • Use IT skills through the drafting and presentation in order to be able to express his /her design ideas. • Prepare architectural and urban landscape drawings competently.
d- General Skills	Through general and transferable skills, students will be able to: <ul style="list-style-type: none"> • Effectively communicate with colleagues and clients using a variety of design techniques.

- Present researches in seminars or group meetings, discuss findings, defend his/her ideas, and communicate effectively in writing, verbally and through drawings and models.
- Work coherently and successfully as part of a team in projects, assignments,..etc.
- Independently seek knowledge, set aims, targets, objectives and plan to meet them with a deadline (time management).

4- Course Content

- Week No.1** An Introduction to Architectural Design, Design and Planning Requirements, Basic Criteria
- Week No.2** Site Considerations in Design, Natural Characteristics, Orientation, Circulation & Parking, Utilities
- Week No.3** Site Considerations in Design, Natural Characteristics, Orientation, Circulation & Parking, Utilities (Continued)
- Week No.4** Functional Requirements in Architectural Design, Preparing an Architectural Program
- Week No.5** Conceptual Design Process, Spatial Organization and Circulation. Use of Diagrams
- Week No.6** Detailed Design, Design Analysis, Use of Diagrams
- Week No.7** Continuation of the previous lecture and evaluation.
- Week No.8** Introduction: Landscape Architecture, Design, Planning, Urban Landscape Characteristics
- Week No.9** Landscape and Natural Resources, Man and Nature, the Ecological Basis, Natural Landscape Characters
- Week No.10** Water-Planning Approach, Water as Resource, as a Landscape Feature- Water related Site Design
- Week No.11** Water-Planning Approach, Water as Resource, as a Landscape Feature- Water related Site Design
- Week No.12** Continuation of the previous lecture and evaluation.
- Week No.13** Plant Materials - Plants in Nature, Significance, Visual Characteristics, Planting Design Process and Principles
- Week No.14** Pavement and site structure in the Urban Landscape Environment. The design Process for an Urban Landscape Project
- Week No.15** Revision

5- Teaching and Learning Methods

The course comprises a combination of:
Lectures and coursework throughout the semester in order for the students to be able to read and identify architectural drawings and planning for urban landscape.

6-Teaching and Learning Methods for Students with Special Needs

- Consulting with lecturer during office hours.
- Consulting with teaching assistant during office hours.
- Private sessions for redelivering the lecture contents.
- For handicapped accessibility, please refer to program specification.

7- Student Assessment

Students must present: An exercise every week in addition to a research for a given topic project under the supervision of tutors, and a six-hour exam.

Students have to present a portfolio on the final jury which will demonstrate the learning outcomes throughout the academic semester and a selection of previous phases of the projects in appropriate form of documentation and presentation. All material and work should be recorded in digital form and presented to a standard suitable for assessment purposes.

Asses No.	Procedures used		Start Week No.	Subm. Week No.	Weighting of Asses.
	Type	To assess			
1	Assignment	Knowledge and understanding.	2	6	20%
2	Drawing exam.	Knowledge and practical skills.		7	10%
3	Assignment	Knowledge and intellectual skills.	8	11	10%
4	Drawing exam.	Knowledge and practical skills.		12	10%
5	Assignment	Intellectual and practical skills.	13	15	5%
6	Research	All skills		15	15%
7	Drawing exam.	All skills.		16	20%
Total					100%

8- List of References:

a- Course Notes	Notes are handed out on a weekly basis.
b- Required Books (Textbooks)	• MCMULLAN, Ransol - <i>Environmental Science & Building</i> , Palgrave.
c- Recommended Books	<ul style="list-style-type: none"> • BAKER Geoferey H, <i>Design Strategies in Architecture: An Approach to the Analysis of Form</i>, 2nd ed., Van Nostrand Reinhold, London, 1996. • CHING Francis, <i>Architectural Graphics.</i>, 2nd ed., Van Nostrand Reinholdr, New York, 1985. • CHING Francis, <i>Architectural: From, Space & Order</i>, Van Nostrand Reinhold, New York, 1979. • NEUFERT Ernest, <i>Architect's Data.</i>, 2nd ed., Blackwell, Oxford, 1980. • SIMONDS, John O, <i>Landscape Architecture: A Manual of Site planning and Design</i>, 2nd ed., McGraw Hill, New York, 1983.
d- Periodicals, Web Sites, etc.	N/A