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 516**	Course Title: **Architectural Design 6**			Academic Year/Level: **5th** year / **9th** semester
Specialization: **Architecture**	No. of Instructional Units			Prerequisite
	Credit **4**	Lecture **2**	Tutorial **6**	**AR415**

2- Course Aim

This course is taking a contextual architectural design approach which will be achieved through studies of an architectural project related to **realistic problems within the urban environment**. The strategy of the program guides the students through field surveys, such that students can build a sufficient understanding of environmental, social, historic and economic factors of urban environments. The student is assisted in studying and proposing solutions to problems pertaining to a selected action area.

The course aims to:

- Enhance the student with practical skills to deal with the comprehensive design project (CDP) starting from the design of a single building, to a contextual design within a given environment.
- Provide graduates equipped to analyze and define design parameters and undertake a selected architectural design project comprehensively within an action area applying modern techniques of environmental design (ecological design, green architecture, sustainable building).

3- Intended Learning Outcomes

a- Knowledge and Understanding	**Through knowledge and understanding, students will be able to:** • Establish a contextual approach to problem solving and incorporating the study of the surrounding built environment. • Explain the impact of professional architectural solutions on the society and the environment locally, regionally and globally.
b- Intellectual Skills	**Through intellectual skills, students will be able to:** • Solve design problems under different circumstances. • Analyze an area's strengths and weaknesses and develop responsive architectural designs within the broader landscape and context of urban planning. • Suggest, formulate and respond to programs or briefs that are appropriate to a specific context and circumstances.
c- Professional Skills	**Through professional and practical skills, students will be able to:** • Work in groups and conduct field studies, systematically collect and document information and communicate with specialists from other disciplines, such as urban planners, structural engineers, transportation engineers, sociologists,…etc. • Examine different techniques and information essential for architectural profession.
d- General Skills	**Through general and transferable skills, students will be able to:** • Present projects in seminars or group meetings, discuss results, defend his/her ideas, and communicate effectively in writing, verbally and through drawings and models. • Work coherently and successfully as a part of a team in projects. • Independently seek knowledge, set aims, targets, objectives and plan to meet them with a deadline (time management).

	• Adopt an open-minded approach in the appraisal of design issues, requirements and opportunities. • Listen and critically respond to the views of others.

4- Course Content

Week No.1	Project 1: Introduction, Project definition
Week No.2	Problem analysis.
Week No.3	Submission of problem analysis
Week No.4	Design concept (urban design)
Week No.5	Design Development (master plan)
Week No.6	Submission of project I.
Week No.7	Project 2: Introduction, Project definition, in addition to a design sketch (Quiz)
Week No.8	Design concept (building type)
Week No.9	Problem analysis.
Week No.10	Conceptual design
Week No.11	Design development (Criticism)
Week No.12	Design development (Preliminary Evaluation)
Week No.13	Submission of Project II
Week No.14	Design Development.
Week No.15	Project submission

5- Teaching and Learning Methods

The course comprises a combination of lectures, group project work, and site visits. The project is scheduled to guide the students through 3 stages of work. Assigned tutors to groups of students provide continuous support and supervision to ensure the progress of individual students against the requirement to produce work to a specific timetable. Field visits to the surrounding urban district of the proposed project area are required to observe the current condition, and to study the potential development of the area.
Stage1: Work conducted in the urban design course (AR442) is reviewed by the tutors. This familiarizes the students with the existing social, economic and environmental conditions of the township or the selected planning area. The students work in groups during this stage and each group executes a field study within the identified area, supervised by an assigned tutor.
Stage2: With acquired skills in conducting contextual studies and making urban development proposals for a selected area from previous courses, students proceed to stage 2 where they focus their study on a selected “action area”. The students in groups propose a development plan for the ”action area” and recommendations should be made for site planning, floor area ratios, urban design, landscape planning, traffic planning and pedestrian circulation.
Stage3: The final stage of the program focuses explicitly on architectural design and gives the students the opportunity to demonstrate skills acquired in previous years. The students' selection of the building site and the design project, appropriate to the level of competence of the students group also plays an important part in bringing out the best to the proposed development.
Stage4: The final stage of the program focuses explicitly on architectural design and gives the students the opportunity to demonstrate skills acquired in previous years. The students' selection of the building site and the design project, appropriate to the level of competence of the students group also plays an important part in bringing out the best to the proposed development.

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: Two projects per semester / for each project students must present at least 3 sketches for each project under the supervision of tutors, a two-day duration project per semester and a six-hour exam.
Students have to present a portfolio during 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. Methods of documentation may include: drawings; photographic material; multi-media material; quantitative & qualitative data; 3D models or prototypes; web-based material. All presented materials and work should be recorded in graphic form and explained to a standard, suitable for assessment purposes.

Asses No.	Procedures used		Start Week No.	Subm. Week No.	Weighting of Asses.
	Type	To assess			
1	Collab. Project	Intellectual and practical skills Transferable skills	1	2	10%
2	Project	All skills	2	7	20%
3	Project	All skills	7	13	20%
4	Drawing exam.	Knowledge and intellectual skills		12	10%
5	Oral exam.	Knowledge and intellectual skills Transferable skills		16	20%
6	Drawing exam.	Knowledge and intellectual skills		16	20%
Total					100%

8- List of References:

a- Course Notes	Notes are handed out throughout the semester.
b- Required Books (Textbooks)	• NEUFERT, Ernst, *Architect's Data*- 2nd Ed., Oxford: Blackwell, 1980.
c- Recommended Books	• BREEN, A. & RIGBY, D., *The New Water Front* - 2nd ed., McGraw Hill, 1996. • CALLENDER, John Hancock, *Time - Saver Standards For Architectural Design Data*. - 6th Ed., Singapore: McGraw Hill, 1982. • DOBNEY, Stephen, *Master Architects Series, Terry Farrell Selected and Current Work*, N.Y: Image Publishing, 1996. • D.SPERRY, Finlayson, *Sasaki Associates Integrated Environments*, N.Y: James L. Treloue, 1997. • GRUBIC, Sandra, *Ten Years, Ten Cities, The Work Of Terry Farrell 1991-2001*, London: Laurance King publishing, 2001. • MOSTAFAVI, Mohsen, *Projects Review 00/01*, U.S.A: Architectural Association, 2001. • THOMPSON, George F.- *Ecological Design And Planning*.- N.Y.: Wiley, 1997. • WATSON. Donald, *Time Saver Standards for Architectural Design Data: The reference of architectural fundamentals* – 7th ed, U.S.A: McGraw Hill, 1997.
d- Periodicals, Web Sites, etc.	N/A