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 312**	Course Title: **Architectural Design 2**			Academic Year/Level: **3rd** year / **5th** semester
Specialization: **Architecture**	No. of Instructional Units			Prerequisite
	Credit **4**	Lecture **2**	Tutorial **6**	**AR211/AR215**

2- Course Aim

This course covers both a study of architectural projects involving a simple program and a study of spatial design according to climatic issues. Students start off by studying the relation of the building with its setting and the orientation according to natural requirements with special emphasis on the local environment. By the end of the course, students learn how to produce projects with an emphasis on human needs and local environmental considerations.

The course aims to:

- Increase the student's awareness of the surrounding environment and its elements.
- Enhance the student with practical skills to solve studio problems in architectural design.
- Emphasize on the understanding of architecture in its cultural context.

3- Intended Learning Outcomes

a- Knowledge and Understanding	**Through knowledge and understanding, students will be able to:** • Define the relationship between the site, climate, the building and its spatial characteristics. • Express designs through architectural drawings.
b- Intellectual Skills	**Through intellectual skills, students will be able to:** • Analyze architectural problems, find alternatives and choose the most appropriate solutions. • Suggest Conceptualize, develop and modify the design of three-dimensional objects and spaces. • Integrate architectural designs in a specific site within the broader landscape. • Design creative elements.
c- Professional Skills	**Through professional and practical skills, students will be able to:** • Produce hand-made 3D models. • Perform architectural presentations (verbally, visually, graphically, etc.) and its tech. • Work as part of a team in data collection.
d- General Skills	**Through general and transferable skills, students will be able to:** • Work in an interdisciplinary environment and elaborate with others. • Express personal opinions freely and correctly in oral, graphic and written forms. • Work coherently and successfully as a part of a team. • 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. • Transfer techniques and solutions from one field of architecture to another.

4- Course Content

Week No.1	Introduction, Project definition.
Week No.2	Research, analysis.
Week No.3	Submission of research, analysis.
Week No.4	Design concept, bubble diagram.
Week No.5	Design Development (plans).
Week No.6	Submission of project I.
Week No.7	Final presentation. A sketch-design exam.
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. Small scale project.
Week No.14	Design development.
Week No.15	Project submission.

5- Teaching and Learning Methods

The course comprises a combination of:
Lectures, class activities, analyzed examples information collection, project work, and studio project work.

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 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 material and work should be recorded in graphic form and presented at 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	1	1	15%
2	Portfolio exam.	Knowledge and practical skills Transferable skills	4	4	5%
3	Project	All skills			10%
4	Assignment	Knowledge and understanding			15%
5	Project	All skills			5%
6	Oral exam.	All skills			20%
7	Portfolio exam.	Intellectual and practical skills Transferable skills			10%
8	Drawing exam.	Knowledge and intellectual skills Practical skills			10%
Total					100%

8- List of References:

a- Course Notes	Notes are handed out to the students throughout the semester.
b- Required Books (Textbooks)	• NEUFERT Ernst, Architect's Data – 2nd ed, Blackwell, Oxford, 1980.
c- Recommended Books	• BAKER Geoferey H., *Design Strategies In Architecture: An Approach To The Analysis Of Form*– 2nd ed., Van Nostrand Reinhold, London, 1996. • CALLENDER John Hancock, *Time Saver Standards For Architectural Design Data* – 6th Ed, Mcgraw Hill, Singapore, 1982. • LEVINSON Edward D, *Architectural Rendering Fundamentals*, Mcraw Hill, N.Y, 1983. • LIN, Mike W, *Architectural Rendering Techniques / A Color Reference*, Woley, N.Y, 1985. • UDDIN, M. Saleh, *Composite Drawing: Techniques For Architectural Design Presentation*, Mcgraw Hill, N.Y, 1997. • WATSON. Donald, *Time Saver Standards for Architectural Design Data: The Reference of Architectural Fundamentals* - 7th ed, McGraw Hill, U.S.A., 1997.
d- Periodicals, Web Sites, etc.	N/A