



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 501	Course Title: Graduation Project	Academic Year/Level: 5th year/10th semester
Specialization: Architecture	No. of Instructional Units Credit 12 Lecture 6 Tutorial 18	Prerequisite AR516

2- Course Aim

The student proceeds to design the project of his choice. The program and location has been prepared in the previous semester. This comprehensive architectural project is the culmination of the student's architectural education. The student must presents new concepts and imaginative solutions based on real problems taking into consideration the environmental, social, cultural and structural systems. The project is presented in a series of drawings, perspectives, models, etc.

The course aims to:

- Emphasize an understanding of the architect's role in creating a sustainable environment for the society; locally, regionally and globally.
- Emphasize an understanding of the complexities of design, urban and planning issues and problems, and the limitations that these impose upon effective design, urban and planning.
- Assist the student to interact with the built and natural environments, interrelationships between land-uses and human activities in multi-dimensional space, including traffic and transport.
- Provide graduates equipped to analyze and define design parameters and undertake a selected architectural design project comprehensively showing principles and methods employed in their selection, and management of design, landscape and planning.

3- Intended Learning Outcomes

a- Knowledge and Understanding	<p>Through knowledge and understanding, students will be able to:</p> <ul style="list-style-type: none"> • Explain the development of the new architectural theories, schools, trends, technologies and structure systems. • Explain the interaction between the built and natural environment; interrelationships between site and human activities in multi-dimensional space, including internal and external treatments. • Mention the relationship between function, form and dimensions. • Demonstrate understanding of the comprehensive design philosophy. • Demonstrate understanding of the nature of physical environmental and its elements and process.
b- Intellectual Skills	<p>Through intellectual skills, students will be able to:</p> <ul style="list-style-type: none"> • Develop comparative thinking between different architectural schools, philosophies directions and theories. • Analyze the architecture influencing factors and the surrounding environment and take them into consideration. • Analyze the society, its symptoms, needs and the technological civilization and their reflection on the architectural design. • Analyze and deal with architectural design, planning and urban problems under different circumstances, find alternatives and choose the most appropriate solutions.

c- Professional Skills	Through professional and practical skills, students will be able to: <ul style="list-style-type: none"> • Work in an interdisciplinary environment and collaborate with others. • Present different subjects scientifically, logically and gently. • Understand professional conduct and ethical responsibility. • Use computer aided design and related software. • Prepare and assemble a portfolio of work.
d- General Skills	Through general and transferable skills, students will be able to: <ul style="list-style-type: none"> • 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	Site Analysis (presentation)
Week No.2	Functional relationships studies and zoning
Week No.3	Initial schematic design for the concept
Week No.4	Initial schematic design for the concept
Week No.5	Initial schematic design for the concept (presentation)
Week No.6	Initial detailed sketch design
Week No.7	Detailed sketch design (presentation)
Week No.8	Design development
Week No.9	Design development & presentation
Week No.10	Design development & presentation
Week No.11	Comprehensive development & revision
Week No.12	Continuation of the previous lecture and evaluation
Week No.13	Presentation
Week No.14	Presentation
Week No.15	Final submission and oral examination

5- Teaching and Learning Methods

The course is managed through supervised tutorials with lecturers and assistants and independent study.

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:

At least 6 sketches for their project under the supervision of tutors.

A portfolio during the oral examination (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; 3 D models or prototypes; web-based material. All presented 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	Project	Intellectual and practical skills Transferable skills	1	3	20%
2	Project	Intellectual and practical skills	4	7	20%
3	Project	Intellectual and practical skills	8	12	20%
4	Oral exam.	All skills	12	16	40%
Total					100%

8- List of References:

a- Course Notes	N/A
b- Required Books (Textbooks)	<ul style="list-style-type: none"> • NEUFERT, Ernst, <i>Architect's Data</i>- 2nd Ed., Oxford: Blackwell, 1980.
c- Recommended Books	<ul style="list-style-type: none"> • CALLENDER, John Hancock, <i>Time - Saver Standards For Architectural Design Data</i>. - 6th Ed., Singapore: McGraw Hill, 1982. • DOBNEY, Stephen, <i>Master Architects Series, Terry Farrell Selected and Current Work</i>, N.Y: Image Publishing, 1996. • MATSUBARA, Hipoakj - <i>Mastring New Architectural Rendering Techniques</i>.- Osaka: Graphic Sha - 1996. • MOSTAFAVI, Mohsen, <i>Projects Review 00/01</i>, U.S.A: Architectural Association, 2001. • WATSON. Donald, <i>Time Saver Standards for Architectural Design Data: The reference of architectural fundamentals – 7th ed.</i>, U.S.A: McGraw Hill, 1997.
d- Periodicals, Web Sites, etc.	N/A