



مركز التنمية العالمي
International Development Center

Technical diploma In Architectural Design



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Introduction:-

The contents of this section will be presented in the form of a training course. This course will provide an integrated, theoretical, practical and technical approach that contains a summary of past experiences in this field and special additions So that the recipient of the course has a complete and comprehensive knowledge of all aspects of architectural design .

The main objectives of the course:-

- To provide an integrated and effective content for the students so that they can be fully qualified in the field of architectural design.
- Link between the theoretical side and the practical and technical aspect so that the student form the complete knowledge in all aspects of the subject with technical compatibility.
- To contribute to the improvement and development of the architectural design environment in Sudan.
- Giving the student the opportunity to practice the course through an integrated training program.

Educational means:-

- theoretical lectures by advanced educational methods (smart screens - tab - projector ...).
- Technical training on the most important applications of architectural design (computer lab).
- practical training on architectural design and criticism process over a specified period of time.

Targeted by the course:-

- The owners or the engineering officials (government agencies), consultants, engineers, contractors and all those related to the architectural design.
- Engineers from the specialties of architecture or interior design or civil and each related to architectural field.
- Anyone who want to be professional in architectural programs (AutoCAD – 3dsmax – plan swift).
- Anyone who has the desire to progress in architecture and to increase his knowledge.

benefits of the course:-

- An authentic certification diploma in architectural design from American university of London documented from higher education management in France.
- An integrated educational center with perfect learning environment and teachers with a high efficient and experience.
- An authentic certification from international development center.
- The theoretical side of this unit will be taught by best architects and one of the owners of the very long practical experience in the architectural design .The teacher will add his experiences in teaching this part. The practical aspect will be in the distribution of participants on projects and Practice design on it.

Part one:-

Theoretical part :(25 hours)

1/ design process

It is the whole stages and levels from beginning of project and program to the final image and result. It includes:-

-context analysis:

This notion belong to the site of the project .its purpose is to explore design problems of a site and make a decision before coming to the (parti) .and here some of words which analysis begin with :-

- **Topography and geology.**
- **Climate and environment.**
- historical context, locality and social structure.**
- physical context (theories, technologies , materials ,scale ,viewsetc.)**

The study includes an application for one example of Sudanese building.

Objective of studying context analysis:-

(Unless you are designing a demountable temporary structure capable of erection on any site, then the nature of the site is one of the few constants in any architectural programmer.)

((PETER FAWCETT))

Context analysis is important to make a design responding to the site environmentally and physically (particularly to close the gap of our environmental problems) ,make a sense of correspondence between nature and architecture and make our design feel innate not intruder .

Beside that it helps for forming the (parti) the central concept of design which organize the general floor plan by the total decisions and ideas jumping from the analysis.

the parti (concept):

it is an implied idea and diagram which organize the general floor plan and give meaning to external experiences .mostly this idea is non architectural **(At its most ambitious, parti derives from matters more transcendent than mere architecture. "L's in confl ict," for example, might be a suitable parti for a new government building for two once-warring factions that have forged a new nation)**(101things I learned from.... Matthew Frederick).

this diagram can be one of plan types linear ,court yard, linked pavilion shed or deep plan .it could also be related to (typology) which means classified by use or form .

the study include general notion of parti and typology related to international examples .

Architectural theory:-

This part including a brief historical presentation showing up the main features and characteristics of these headlines :

- 1- modernism.
- 2- postmodernism.
- 3- deconstruction.

It is attached with studying styles of some architects:-

- ZAHA HADID.**
- FRANK LLOYD WRIGHT.**
- MES VAN DER ROUH.**
- PETER. Eiesenman.**

Should include some of projects of those architects comprehend there styles and make analysis to there philosophy in model making .also analysis to some aesthetic qualities in there projects like (unity ,harmony ,balance ,proportion and contrast)>

Part two :-

Computer programs in architectural design :(80 hours)

1/AUTOCAD:

Its software program supporting 2d and 3d drawings .developed by autodesk in 1982.

- program advantages :-

It is one of the first software programs which had been used in 2d,3d drawings to all types of projects as well as its flexibility to make adjustments and so many copies according to needs .it has also the possibility for export to 3d modeling program like 3dstudio max .one more thing it is the dominance 2d program in labor market.

Academic contents of AutoCAD program:-

- Recognition the main frontage of the program
- Learn the fundamentals of drawing tools.
- Learn how to use adjustments tools.
- Learn text ,hatch ,block ,layers and dimension.
- Learn how to draw 2d elements like furniture and reuse it in another project.

2/ 3D STUDIO MAX:

It is software programming for 3d modeling with possibilities to put lighting and materials .a great program used in many companies (design companies, propaganda and advertizing companies) it also used in cinematic production and games.

The most advantages of 3dsmax contained in its unlimited opportunities in model making as well as features of light and material and its good presentation by vray render attached to it.

3/ PLAN SWIFT :

Is an on-screen digitizing and takeoff system that is suitable for both commercial and residential GCs and subcontractors in a number of industries, such as electrical, heavy/highway, plumbing, and custom and production home builders.

It is a construction estimating fast and accurate.

Part three:-

Practical study :(25 hours)

The aim of this course is to build an integrated knowledge form between the theoretical aspect and the technical application and to connect them to the practical field in the architecture, so that the trainee will have a complete and coherent conception of all aspects of architectural design. The student will be aware of the problems and difficulties encountered in designing and how to deal with them. The appropriate decisions to solve the problems and applying theories of architecture in practice, the student will be a degree of qualification that qualifies him to start his work in the field of design once the completion of the course.

The practical training aspect includes what the student has studied on the theoretical side, such as:

- context analysis application in Sudan environment.
- making conceptual model by 3dsmax and AutoCAD .
- a research paper contains critical study to one of architectural modern theories.

Item	Subject title	DAYS	HOURS	
	Theoretical part	5	25	
	Architectural computer programs	AUTOCAD	5	25
		3DSMAX	8	40
		PLANSWIFT	3	15
	Practical part	5	25	
	Total sum	26	130	
	Certification diploma from the center			
	Expertise certification diploma from international university			

Part Four: - References

1. Architectural design note book by peter fawcett .
2. 101 things I learned from architectural school by Matthew Frederick.
3. Architecture: from prehistory to post moderanity .
4. Contemporary architecture-zaha hadid volume (1).
5. Site analysis a contextual approach to sustainable land planning and site design by james largo.
6. From idea to building by Michael brawne.



AU
**ARCHITECTURAL
DESIGN**

Architectural design diploma provides an integrated and effective content for the students so that they can be fully qualified in the field of architecture.

Also, the Link between the theoretical side and the practical and technical aspect in the course make the student form the complete knowledge in all aspects of the subject with technical compatibility.

It is also contributing to the improvement and development of the architectural design all over the world.

Course Routes Offered

Qualification	Route
DBA	BY DIRECTED COURSEWORK STUDY / RESEARCH & DISSERTATION
PhD	BY RESEARCH & DISSERTATION
BBA	BY DIRECTED COURSEWORK STUDY

Course Modules

Module Code	Module Title
AD11	DESIGN PROCESS
AD12	SITE-CONTEXT ANALYSIS
AD13	ARCHITECTURAL DESIGN CONCEPT
AD21	THE TYPOLOGY AND PLAN TYPE
AD31	ARCHITECTURAL THEORY
AD41	ARCHITECTURAL PROGRAM(AUTOCAD).
AD42	ARCHITECTURAL PROGRAM(3DSMAX).
AD43	PLANSWIFT