Arab Academy for Science, Technology & Maritime Transport
College of Engineering & Technology
Architectural Engineering and Environmental Design Department

Serial No. 1

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 326**	Course Title: **Computer Graphic Design**		Academic Year/Level: **3rd** year / **6th** semester
Specialization: **Architecture**	No. of Instructional Units		Prerequisite
	Credit **2**　　　Lecture **1**	Tutorial **3**	**AR283**

2- Course Aim

> This course develops the students' capacity to handle all the tools, techniques, softare and media that are available in the vast world of graphics. The course focuses on developing critical and creative thinking processes to prepare the students for any professional setting.
>
> **The course aims to:**
> • Provide the student knowledge of graphic design history, principles and practices.
> • Provide the student with skills of editing, refining, adjusting, presenting, and building virtual objects…etc.
> • Encourage students to develop and present their architectural designs and creative ideas.

3- Intended Learning Outcomes

a- Knowledge and Understanding	**Through knowledge and understanding, students will be able to:** • Explain the main graphic principles, tools, media and techniques from traditional approaches to the use of computer-generated art and its role in the interface of the World Wide Web.
b- Intellectual Skills	**Through intellectual skills, students will be able to:** • Apply graphic programs applications and manipulate scaled and scale free images. • Create their own designs, ideas and concepts using graphic software. • Suggest the most appropriate software application for a specific purpose and • Choose highly interactive methods in project presentations.
c- Professional Skills	**Through professional and practical skills, students will be able to:** • Prepare and present architectural projects. • Use IT skills and different techniques which are essential for the architectural profession. • Prepare and present complete static 2D or 3D graphic design with application on different topics.
d- General Skills	**Through general and transferable skills, students will be able to:** • Present drawings in seminars, discuss problems and communicate effectively verbally and through drawings. • Independently seek knowledge, set aims, targets and objectives. • Listen and critically respond to the views of others. • Transfer techniques and solutions from one field to another.

4- Course Content

Week No.1	Introduction: Getting started with sketch-up. Working with files, exporting and importing.
Week No.2	Drawing tools, editing tools, construction tools, shadows.
Week No.3	Styles, components, materials.
Week No.4	Sections, animation, scenes.
Week No.5	Introduction: Getting started with Piranesi. Importing from sketchup.
Week No.6	Coloring modes, locks and cutouts.
Week No.7	Materials, Special techniques.
Week No.8	Digital painting and moving paint.
Week No.9	Introduction: Getting started with Photoshop Working with files: new files, saving, editing preferences, using rulers, guides, and grid.
Week No.10	Selection modes: Selecting geometric areas, using lasso tool, selecting by color range, Modify Selection: Resizing, rotating, flipping, cropping an image, canvas editing
Week No.11	Color modes and colors models. Adjusting colors and layers - Paint brushing and Art Tools.
Week No.12	Continuation of the previous lecture and evaluation.
Week No.13	Multiple layers and layer Techniques. Using masks and channels pallets - paths, filters, and image improving techniques.
Week No.14	Artistic and distortion filters.
Week No.15	Revision

5- Teaching and Learning Methods

The course comprises a combination of:
Lectures, class activities, coursework, discussion sessions and practical training.

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: Four projects per semester, consisting of a first project submitted in the 7th week, a second project submitted in the 10th week, a third project submitted in the 11th week and the final project to be submitted along with the final exam.

Asses No.	Procedures used		Start Week No.	Subm. Week No.	Weighting of Asses.
	Type	To assess			
1	One day project	Knowledge and understanding	3	3	5%
2	Project	Knowledge and practical skills	3	7	10%
3	Practical exam.	Intellectual and practical skills		7	15%
4	Project	Knowledge and understanding	9	10	5%
5	Project	Knowledge and practical skills	10	11	5%
6	Practical exam.	Knowledge and intellectual skills		12	10%
7	One day project	All skills	13	15	10%
8	Project	Knowledge and understanding Practical skills		16	40%
Total					100%

8- List of References:

a- **Course Notes**	Notes are handed out throughout the semester.
b- **Required Books** (Textbooks)	• LYNCH, Richard, Using Adobe Photoshop, Sams Publishing, USA, 2006.
c- **Recommended Books**	• ROSE, Carla, Adobe Photoshop 5 US, Sams Publishing, USA, 2007.
d- **Periodicals, Web Sites, etc.**	http://www.adobe.com http://www.sketchup.google.com http://www.piranesi.co.uk