



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

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| Course Code: AR 111 | Course Title: Visual Studies 1 | Academic Year/Level: 1st year / 1st semester |
| Specialization: Architecture | No. of Instructional Units Credit 3 Lecture 2 Tutorial 4 | Prerequisite None |

2- Course Aim

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| <p>This course is an introduction to the techniques of graphic representation in pencil, pen and ink, and charcoal. Students begin by studying visual properties of form and space: definition, organization; basic principals of architecture, proportion and scale and ordering principles. An Introduction to architectural photography techniques and methods of forming poster compositions through using Adobe Photoshop Program are included in the course. Finally, students reach an understanding of form, space and principles that guide their abilities of ordering and architectural design in the built environment.</p> <p>The course aims to:</p> <ul style="list-style-type: none"> • Provide the student with knowledge of architectural design principles and architectural vocabularies. • Develop the students' abilities to visually express their own thoughts and ideas through both architectural drawing and freehand sketching using pencil, charcoal, ink, photography and cut and fill 3D modeling. • Provide the student with knowledge of rendering techniques which enable him to express and represent the visual effects of shading tones and textural expressions. |
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3- Intended Learning Outcomes

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| a- Knowledge and Understanding | <p>Through knowledge and understanding, students will be able to:</p> <ul style="list-style-type: none"> • Demonstrate understanding of architectural design principles and architectural vocabularies. |
| b- Intellectual Skills | <p>Through intellectual skills, students will be able to:</p> <ul style="list-style-type: none"> • Create architectural composition, find alternatives and choose the most appropriate solutions. • Design and develop the composition of three – dimensional objects and spaces. • Design creative compositions. |
| c- Professional Skills | <p>Through professional and practical skills, students will be able to:</p> <ul style="list-style-type: none"> • Perform architectural presentation (orally, visually, drawings, etc.) in various techniques. • Prepare architectural design drawings and presentation. • Work as a part of team. |
| d- General Skills | <p>Through general and transferable skills, students will be able to:</p> <ul style="list-style-type: none"> • Express personal opinions and express them freely and correctly in oral, reading and written forms. • Work coherently and successfully as part of a team in projects and assignments. • 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. • Listen and critically respond to the views of others. |

4- Course Content

- Week No.1** Introduction to the Architectural Engineering and Environmental Design Department, and the curriculum of study throughout the five year program. In addition to the objectives of the program, an introduction to the Visual Studies courses is given, as well as an explanation of the Credit hour system.
- Week No.2** Techniques of presentation and rendering; freehand drawings, orthographic projection (plan, section, elevation). Axonometric, Isometric, Perspective, etc.
- Week No.3** The definition of architecture: composition and design, elements of composition. Primary elements, point, line, plane, volume and form.
- Week No.4** Form: visual properties of form, regular & irregular forms, subtractive & additive forms.
- Week No.5** Space: definition, elements defining space: horizontal elements, base plane, overhead plane, vertical elements, etc.
- Week No.6** Organization of form & space: spatial relationships, spatial organizations.
- Week No.7** Continuation of the previous lecture and evaluation.
- Week No.8** Photography: technical aspects: definition means. Angle of view. Aperture – lens, shutter & diaphragm. Shutter speed and exposure time, exposure meters. Automatic camera. ASA and DIN.
- Week No.9** Photography: architectural aspects – photographic composition poster through using Adobe Photoshop Program.
- Week No.10** Proportion and scale: definition, proportions systems, Golden Section, modular, ken, human scale, anthropometry, ergonomics.
- Week No.11** Basic principles of architecture: convenience - poster composition through using Adobe Photoshop Program.
- Week No.12** Basic principles of architecture: durability.
- Week No.13** Basic principles of architecture: beauty. "Axis, Symmetry, Hierarchy.
- Week No.14** Rhythm and repetition, unity, emphasis and harmony.
- Week No.15** Balance, anomaly, contrast, etc.

5- Teaching and Learning Methods

The course comprises a combination of:
Lectures, class activities, discussion sessions, 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 a portfolio containing their learning outcomes throughout the academic semester. 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 suitable for assessment purposes.

| Asses No. | Procedures used | Start Week No. | Subm. Week No. | Weighting of Asses. |
|--------------|---|----------------|----------------|---------------------|
| | Type | | | |
| 1 | Homework: Pencil freehand sketch drawing size (A4). | 1 | 2 | 10% |
| 2 | Classwork: 1(a) Architectural drawing 59.4X42, canson. | 2 | 3 | 10% |
| | Homework: Pencil freehand sketch drawing, single object (A4). | 2 | 3 | 10% |
| 3 | Classwork: 1(b) Freehand drawing 59.4X42, canson. | 3 | 3 | |
| | Homework: Pencil freehand sketch drawing, single object (A4). | 3 | 4 | |
| 4 | Classwork: 2(a) Architectural drawing 59.4X42, canson. | 4 | 4 | 2% |
| | Homework: Pencil freehand sketch drawing, single object (A4). | 4 | 5 | |
| 5 | Classwork: 2(b) Freehand drawing 59.4X42, canson. | 5 | 5 | 2% |
| | Homework: Pencil freehand sketch drawing, single object (A4), canson | 5 | 6 | |
| 6 | Classwork: Pencil freehand drawing, single object 59.4X42, canson | 6 | 6 | 2% |
| | Homework: Pencil freehand drawing composition, 2 objects (A4), canson. | 6 | 7 | |
| 7 | Classwork: Pencil freehand drawing, two objects, 59.4X42, canson | 7 | 7 | 2% |
| | Homework: Pencil freehand drawing composition, 2 objects size (A4), canson. | 7 | 8 | |
| 8 | Classwork: Charcoal freehand drawing, Statue or architectural element (s) 59.4X42, canson. | 8 | 8 | 2% |
| | Homework: Pencil freehand drawing composition, 2 objects size (A4), canson. | 8 | 9 | |
| 9 | Classwork: Pen and Ink freehand drawing (given figures) calque + canson 59.4X42. | 9 | 9 | 2% |
| | Homework: Photography exercise – 12 snapshots 13 x 18 cm. On size (A2), canson - and a photographic poster through using Adobe Photoshop Prog | 9 | 11 | |
| 10 | Classwork: Pen and Ink freehand drawing (given figures) calque + canson 59.4X42. | 10 | 12 | 2% |
| | Homework: Pencil freehand drawing composition, 2 objects size (A4), canson. | 10 | 11 | |
| 11 | Classwork: Pen and Ink freehand drawing (given figures) - Poster Design - calque + canson – through using Adobe Photoshop Prog. | 12 | 15 | 2% |
| 12 | Classwork: 2 D. cut and fill design 2 (A3) sheets (white and grey) + 2 (A4) sheets (Black and Colored) | 12 | 12 | 2% |
| | Homework: Pencil drawing: Paraline, perspective and orthographic projections. | 12 | 13 | |
| 13 | 12 th Exam | | | 10% |
| 14 | Classwork: 2 D. cut and fill design. 2 (A3) sheets (white and grey) + 2 (A4) sheets (Black and Colored) | 13 | 13 | 2% |
| 15 | Classwork: 3 D. cut and fill design. White canson sheet size 42 x 42 cm. Gray cardboard size 45 x 45 cm. | 13 | 14 | |
| 16 | Classwork: Sketch drawing for the 3 D. model. | 14 | 15 | 2% |
| 17 | Portfolio Exam. | | | 10% |
| 18 | Final Exam | | | 40% |
| Total | | | | 100% |

8- List of References:

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| a- Course Notes | Notes are handed on a weekly basis. |
| b- Required Books (Textbooks) | <ul style="list-style-type: none">• CHING, Francis, D.K., <i>Architecture Form, Space and Order</i>, 2nd edition, Van Nostrand Reinhold- New York, 1996. |
| c- Recommended Books | <ul style="list-style-type: none">• ALBERT, Greg, and WOLF, Rache, <i>Basic Drawing Techniques</i>, North Light Books, Ohio, 1991.• CHING, Francis D.K., <i>Design Drawing</i>, John Wiley & Sons, New York, 1998.• CHING, Frank, <i>Architectural Graphics</i> 3rd ed., Van Nostrand, New York, 1996.• CERVER, Francisco Asensio, <i>Drawing For Beginners</i>, Konmann Verlagsgesellschaft, Cologne, 1999.• DODSON, Bert, <i>Keys to Drawing</i>, North light Books, Ohio, 1985.• GAIR, Angela, <i>Drawing</i>, New Holland, London, 1994.• HARRIS, Michael, G., <i>Architectural Photography</i>, Butterworths, Oxford, 1995.• HARRIS, Michael, G., <i>Professional Architectural Photography</i>, Focal Press, Oxford, 1998.• KOPELOW, Gerry, <i>How to Photograph Buildings and Interiors</i>, Princeton Architectural Press, New York, 1998.• LAWSON, Bryan, <i>The Language of Space</i>, Architectural Press, Oxford, 2001. |
| d- Periodicals, Web Sites, etc. | N/A |