Course Specifications of:

Sustainability and Architecture

Program(s) on which the course is given:M.Sc. in Architectural Design

Compulsory or Elective element of program: Elective

Department offering the program: Architecture

Academic year / Level: year/ 2014 -2015

Date of specification approval: June 2012

1. Basic Information
2. Title: Sustainability and Architecture Code: Arch602
3. Credit Hours: 3 Lecture: 3 practical:0
4. Semester work: 120 Final Exam: 90 Practical: 90 Total: 300
5. Professional Information

1- Overall aims of course:

1. Provide architects with the forefront informative knowledge about sustainable architecture.
2. Provide architects with sufficient theoretical and technical back ground about how to apply scientifically methodological ways to attain environmentally suitable designs and appropriate execution practices.
3. Develop architects intellectual capabilities for deeper understanding of their local environment and its architectural requirements.
4. Provide knowledge about the recent applications of science and technology to sustainable architecture field.

2- Intended learning outcomes of course (ILOs):

1. **Knowledge and understanding**

2.1.3 Recognize the importance of science and technology in the development of architectural design field.

2.1.5 Define the principles and fundamentals of quality in architectural design field and professional practice.

1. **Intellectual skills**

2.2.1 Classify and assess information in the fields related to architectural design.

2.2.3Link different knowledge sources to solve architectural problems.

2.2.4 Recognize risks in professional practices of architectural design.

2.2.5 Explain how to make professional decisions in various professional contexts.

1. **Professional and practical skills**

2.3.2 Develop the ability to write and evaluate reports professionally.

2.3.3 Develop the capability to compare between various ideas and verify or refute them.

1. **General and transferable skills**

2.4.2 Assess him/her self and identify his/her own personal learning needs and conduct self-learning.

2.4.3 Assess the performance of others by Setting several basis and standards.

3- Contents

|  |  |  |  |
| --- | --- | --- | --- |
| Topic No. | Topic | No. of weeks | Total no. of hours |
| 1 | Community and sustainability | 1 | 3 |
| 2 | Local values ​​of the physical, natural and manufactured environment. | 1 | 3 |
| 3 | ways of activating the Architecture and local Urbanism | 1 | 3 |
| 4 | prevailing beliefs and concepts | 1 | 3 |
| 5 | Empowerment and Participation | 1 | 3 |
| 6 | environmental value of  indigenous architecture | 1 | 3 |
| 7 | space and needs /aspects of personal and local cultural and social values ​​ | 1 | 3 |
| 8 | architectural features | 1 | 3 |
| 9 | architectural features | 1 | 3 |
| 10 | Structures systems and sustainability. | 1 | 3 |
| 11 | environmental assessment of the ways of sustainability in architecture | 1 | 3 |
| 12 | development of local activities | 1 | 3 |
| 13 | Masdar City Abu Dhabi | 1 | 3 |
| 14 | Sustainable architecture module | 1 | 3 |
| 15 | Oral exam | 1 | 3 |
| 16 | Final exam | 1 | 3 |
| TOTAL | | 16 | 45 |

4- Course Matrix

|  |  |  |
| --- | --- | --- |
| ILOs code number | Teaching/learning methods and strategies | Assessment methods and strategies |
| *2.1.3*  *2.1.5* | Acquisition of core knowledge and understanding is achieved mainly through   * lectures, * seminars, * directed reading,. | Assessment will be through   * individual coursework assignments, * oral arranged discussions about particular issues. |
| *2.2.1*  *2.2.3*  *2.2.4*  *2.2.5* | Analysis and problem‐solving skills are developed through   * lectures, * seminars * small group exercises. * project work and independent study. | Assessment of students   * prepared term research paper * number of essays prepared in responses to research * Research skills are developed through a research project in the course * Analysis and design skills and creativity are assessed through oral, written examinations, and Quizzes * Quizzes based abilities are mainly assessed through performance |
| *2.3.2*  *2.3.3* | * Projects demonstrations, * practical work, * practical based projects in selected particular sites, visits for site analysis | Practical skills are assessed through   * Quizzes prepared concept designs, * report writing about it, coursework exercises * project based on research presentations, * oral exams |
| *2.4.2*  *2.4.3* | * Presentations in several seminars (compulsory to be attended by a panel of departmental staff and other students). * Attendance of workshops * Compulsory writing reports | general skills are assessed through   * report writing * coursework exercises * oral exams * project based on research presentations, |

5- Assessment schedule

* Assessment 1 Assignments on week’s9-14
* Assessment 2 Oral exam on week 15
* Assessment 3 Final exam on week 16

6- Weighting of assessments

* 40% Home assignments
* 30% Oral examination
* 30% Final-term examination
* 100% Total

7- List of References

1. *Architecture for people: Explorations in a new humane environment*. New York, NY:

Holt, Rinehart, And Winston, 1980.

1. Bennets, Helen, Antony Radford, and T. J. Williamson. *Understanding Sustainable*

*Architecture*. London: Spon Press, 2002.

1. *Big and Green: Sustainable Skyscrapers for the Twenty-first Century*. New York:

Princeton Architectural Press, 2003.

1. Brown, G. Z., and Mark Dekay. *Sun, Wind & Light: Architectural Design Strategies*. NewYork: Wiley, 2000
2. Bloomer, Kent C., and Charles Moore. *Body, Memory and Architecture (A Yale*

*paperbound)*. New Haven: Yale University Press, 1977.

8- Facilities required for teaching and learning

Lecture room equipped with overhead projector

Presentation board, computer and data show

9- Intended learning outcomes of course (ILOs) Matrixes

**9.1 Matrix 01: Course contents &Assignment&ILOs**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No. of weeks** | **Course Content** | **Total no. of hours** | **a. Knowledge andunderstanding** | | **b. Intellectual Skills** | | | | **c. Professional Skills** | | **d. General Skills** | |
| 2.1.3 | 2.1.5 | 2.2.1 | 2.2.3 | 2.2.4 | 2.2.5 | 2.3.2 | 2.3.3 | 2.4.2 | 2.4.3 |
| 1 | Community and sustainability | 3 |  |  |  |  |  |  |  |  |  |  |
| 2 | Local values ​​of the physical, natural and manufactured environment. | 3 |  |  |  |  |  |  |  |  |  |  |
| 3 | ways of activating the Architecture and local Urbanism | 3 |  |  |  |  |  |  |  |  |  |  |
| 4 | prevailing beliefs and concepts | 3 |  |  |  |  |  |  |  |  |  |  |
| 5 | Empowerment and Participation | 3 |  |  |  |  |  |  |  |  |  |  |
| 6 | environmental value of  indigenous architecture | 3 |  |  |  |  |  |  |  |  |  |  |
| 7 | space and needs /aspects of personal and local cultural and social values ​​ | 3 |  |  |  |  |  |  |  |  |  |  |
| 8 | architectural features | 3 |  |  |  |  |  |  |  |  |  |  |
| 9 | architectural features | 3 |  |  |  |  |  |  |  |  |  |  |
| 10 | Structures systems and sustainability. | 3 |  |  |  |  |  |  |  |  |  |  |
| 11 | environmental assessment of the ways of sustainability in architecture | 3 |  |  |  |  |  |  |  |  |  |  |
| 12 | development of local activities | 3 |  |  |  |  |  |  |  |  |  |  |
| 13 | Masdar City Abu Dhabi | 3 |  |  |  |  |  |  |  |  |  |  |
| 14 | Sustainable architecture module | 3 |  |  |  |  |  |  |  |  |  |  |
| 15 | Oral exam | 3 |  |  |  |  |  |  |  |  |  |  |
| 16 | Final exam | 3 |  |  |  |  |  |  |  |  |  |  |

**9.2 Matrix 02: Aims &ILOs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Aims**  **ILOs** | **1** | **2** | **3** | **4** |
| 2.1.3 |  |  |  |  |
| 2.1.5 |  |  |  |  |
| 2.2.1 |  |  |  |  |
| 2.2.3 |  |  |  |  |
| 2.2.4 |  |  |  |  |
| 2.2.5 |  |  |  |  |
| 2.3.2 |  |  |  |  |
| 2.3.3 |  |  |  |  |
| 2.4.2 |  |  |  |  |
| 2.4.3 |  |  |  |  |

Course coordinator: **Professor dr./MaazAlgada**

Course instructor: **Professor dr./MaazAlgada**

Date 25 / 5 / 2014