

Syllabus

Faculty **Architecture and Design**
Department **Architectural Engineering**
Semester **Second**
Academic Year **2019/2020**

Course Name **Green Buildings and Sustainable
Design**
Course Number **1101352**

1. Instructor Information



F112-3, Rev. c

Ref.: Deans' Council Session (03/2018-2019), Decision No.: 14, Date: 15/09/2018

1. Lecturer Name: Shireen Alkhaldi
2. Office Number: B 330
3. Phone Number: +962 6 4790222
4. Email: salkhaldi@meu.edu.jo
5. Office Hours: Sat:12:00-2:00

2. Course Details

1. Meeting Times: Sun, Tues: 11:30-1:30
2. Location: E011

3. Sources and References

1. Course Book: GREEN BUILDING ILLUSTRATED
Francis D. K. Ching, Wiley, 2014
2. SUN, WIND AND LIGHT: ARCHITECTURAL DESIGN STRATEGIES
Brown, G.Z. AND DeKay, M., John Wiley & Sons, 2000

4. Course Description:

Introduction to the concept of sustainability and its objectives; the creation of green architectural structures and spaces that offer better and healthier habitable contexts for all living creatures in general.

5. Aims and Objectives:

The course proposes an integrated environmental design approach in architecture with emphasis on design and problem-solving approaches where technical and theoretical knowledge is well integrated. It will present various green design strategies in terms of architecture and urban planning.

6. Course Learning Outcomes (CLOs):

Upon successful completion of this course, the learner should be able to:

1. Understand of the opportunities and benefits which arise from the application of environmental design principles to architecture and urban design;
2. Form considered judgments about the integrated environmental design approach for a specific architectural project;
3. Demonstrate an understanding of environmental design principles in relation to architectural projects;
4. Understand environmental design issues and relate them to specific design problems;



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5. Demonstrate an understanding of the relevance of various research methods according to the studied subjects;
6. Evaluate and selectively apply appropriate environmental design tools and techniques in the design process;
7. Understand the human factors and comfort conditions affecting the perception of the built environment;
8. Appreciate the architectural design implications of environmental issues;
9. Demonstrate their ability to integrate environmental design principles within architectural projects in other design modules.

7. Program Learning Outcomes (PLOs):

1. Implement concepts of architecture with high proficiency.
2. Keep pace with intellectual and practical developments to fulfill the varying needs of society.
3. Understand the importance of local heritage and preserve it.
4. Understand the diverse civilizations of the world and boost cultural exchange.
5. Apply innovation and critical thinking on various fields of Architecture.
6. Find creative and innovative solutions for various design dilemmas.
7. Use high skills in expressing and communication.
8. Continuously learn how to conduct research and apply it in professional practices.
9. Adhere to professional ethics and principles of practice.

8. Teaching Methods

The methods of instruction may include, but are not limited to:

1. Interactive theoretical lectures with slide shows,
2. Watching and discussing relevant Videos, and field visits

The following methods of learning assessment will be used in this course

| # | Evaluation | Value | Description |
|-------|--|-------|---------------------|
| 1. | <ul style="list-style-type: none"> - Closed questions - Short answers - Identifying artworks - Translation of technical terms | 40% | 2 Exams |
| 2. | <ul style="list-style-type: none"> - A research about or a green architectural building to be presented in class | 10% | Presentation |
| 3. | <ul style="list-style-type: none"> - Evaluation of lecture notes - Attendance, punctuality, and conduct - Initiatives and self-motivated research - Participation in discussions | 10% | Class Participation |
| 4. | Final Design Project | 40% | Final Project |
| Total | | | 100% |

9. The Timetable for the Implementation of Course



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| Week | Subject | CLOs | PLOs |
|------|--|------|-------|
| 1 | Introduction of the course goal and objectives | 1-8 | 2,5,8 |
| 2 | Sustainability Definitions Sustainability history | 1-8 | 2,5,8 |
| 3 | Sustainability concepts | 1-8 | 2,5,8 |
| 4 | Green buildings: definitions | 1-8 | 2,5,8 |
| 5 | Green buildings: Active & Passive, Sustainable Site | 1-8 | 2,5,8 |
| 6 | First Exam | 1-8 | 2,5,8 |
| 7 | Building Shape, Day lighting | 1-8 | 2,5,8 |
| 8 | Natural Ventilation and cooling | 1-8 | 2,5,8 |
| 9 | Water Efficiency, Energy Efficiency, Sustainable Materials | 1-8 | 2,5,8 |
| 10 | Second Exam | 1-8 | 2,5,8 |
| 11 | Project | 9 | 1,6,7 |
| 12 | Project | 9 | 1,6,7 |
| 13 | Project | 9 | 1,6,7 |
| 14 | Project | 9 | 1,6,7 |
| 15 | Project | 9 | 1,6,7 |

10. Course Policies

1. Attendance: Students are expected to attend all classes of this course (without exception). A prior approval is required for class absence except for emergencies. However, any student with 15% short attendance will not be allowed to attend the final exam, and may better drop the course.
2. Delays: Students are not allowed to come late to class. Any student coming more than 5 minutes late will be marked absent. However, he/she may still be allowed to attend the class in spite of being marked absent if he/she wishes to do so, on the condition that the student does not make a habit of it, and that the number of tardy students is limited to a little number of very special cases.
3. Examinations: Failure in attending a course exam will result in a zero mark unless the student provides an excuse acceptable to the instructor, the Head of the Department, and the Dean who approves a re-sit exam. It is the student's responsibility to attend the exam at the correct time and place. The first and second exam papers will be returned to the students.

Re-sit Exams: The student will not be allowed to re-sit an exam unless he/she furnishes the institute with written evidence of the following cases: Sickness (by providing a medical report stamped by University physician within the time limit stated by the University), the death of a member of his/her family, an accident. In the case of natural disasters or severe conditions that affect all students in general (e.g. heavy snow storms) the situation shall be properly handled and announced by the administration.

4. Homework and Projects: Exercises will take place in the class room and will be continued at home.
5. Attending the Exams and Meeting the Deadlines:
In the event that a student shows up late for the 1st or 2nd exam, he/she will be permitted to attend the exam on the condition that none of his/her has already left the room; also he/she will not be allowed any extra time. In the event that a student is more than 30 minutes late for the final exam, he/she will not be permitted to attend the exam.
6. Cheating and Punishment: Cheating is an attempt to gain marks dishonestly and includes: Copying from another student's work, using materials not authorized by the institute or instructor, collaborating with another student during a test without permission, knowingly using, buying, selling, or stealing the contents of a test, getting help from outside during a test by using any kind of electronic device, etc.