

COURSE Syllabus

Course Name: Green buildings

Course Number: 0408326, 04085181

General Course Information:

Course title	Green building
Course number	0408326, 04085181
Credit hours (theory, practical)	3 hours (theory)
Contact hours (theory, practical)	3 hours (theory)
Prerequisites/corequisites	04083261
Academic Program	Renewable energy
Program code	RE
Awarding institution	Isra University
Faculty	Engineering
Department	Renewable energy
Level of course	3 rd year
Academic year /semester	2022/2023 (1 st S)
Awarded qualification	B.Sc
Other department(s) involved in teaching the course	-
Language of instruction	English
Date of production/revision	-

Course Coordinator:

Coordinator's Name: faten alsarayrah
Office No.: 3rd floor
Office Phone: 2502
Office Hours: Sun: [9:00-10:00], Mon: [11:00-12:00], Tue: [9:00-10:00], Wed: [11:00-12:00], Thu: [12:00-1:00]
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Other Instructors:

Instructor's Name:
Office No.:
Office Phone:
Office Hours:
Email:

Course Description:

The course is intended to furnish the students with an understanding of the environmental requirements of buildings, including thermal, lighting and acoustics settings.

Text Book: Author(s), Title, Publisher, Edition, Year, Book website.

Sustainable construction: green building design and delivery, 4th edition, C.J.2016

References: Author(s), Title, Publisher, Edition, Year, Book website.

1. Required book (s), Sam Kubba, "Handbook of green building design and construction", 2nd edition, elsevies inc,2016

Course Educational Objectives (CEOs):

1.	Identify an understanding of the different elements of engineering project development while focusing on the design stage.
2.	The second major objective is grounded in the agreement in recent years of what exactly is meant by green when applied to building products and the adoption of a widely accepted methodology for determining what is required for a new building to be certified as green with respect to energy consumption and exterior and interior environmental consideration.

Intended Learning Outcomes (ILO's):

	Intended Learning Outcomes (ILO's)	Relationship to CEOs	Contribution to PLOs
A	Knowledge and Understanding:		
A1	Obtain an understanding of the different elements of engineering project development while focusing on the design stage.		

B	Intellectual skills:		
B1	Obtain an understanding of the historical need for conserving energy, making more efficient use of resources, and protecting the ambient and working environment.		
C	Subject specific skills:		
C1	Obtain an understanding of the reasoning leading to each of the LEED points pertaining to the civil and environmental engineer. within a PV system and how they work: battery and charge controller, DC/AC converter (inverter), DC/DC converter and loads.		
D	Transferable skills:		
D1	Apply aspects of green design of new construction and major renovations of buildings in a design project.		

Topic Outline and Schedule:

Topic	Weeks	Achieved ILOs
Introduction to green building	2	
Sustainable sites	3	
Thermal dynamics of buildings.	4	
Energy efficiency	5	
Energy efficiency continuous	6,7	
Water efficiency	8	
Mid term exam	8	
Energy and atmosphere	9, 10	
Materials and resources	11	
Indoor environmental quality	13	
Indoor environmental quality continuous	14	

Students presentation	15	
Final exam	16	

Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

- Lectures

Course Policies:

A- Attendance policies:

The maximum allowed absences are 15% of the lectures.

B- Absences from exams and handing in assignments on time:

First Exam and second exam can be retaken based on approval of excuse by the instructor's discretion.

Not handing assignment on time will incur penalties.

C- Academic Health and safety procedures

D- Honesty policy regarding cheating, plagiarism, and misbehaviour:

Cheating, plagiarism, misbehaviour will result in zero grade and further disciplinary actions may be taken.

E- Grading policy:

- All homework is to be posted online through the e-learning system.
- Exams will be marked within 72 hours and the marked exam papers will be handed to the students.

F- Available university services that support achievement in the course: **Labs, Library.**

Required equipment:

Lap top, Data show.

Assessment Tools implemented in the course:

- ☐ First Written Exam.
- ☒ mid
- ☐ Final Written Exam.
- ☐ Quizzes.
- ☒ Homework.
- ☐ Integrative Projects.
- ☐ Case Study.
- ☐ Written Reports.
- ☒ Participation in Lecture.
- ☐ Practice in the Lab.
- ☒ Illustrative Presentations.

- ☐ Oral Exams.
☐ Others (identify):

Program Learning Outcome (PLOs):

Program Learning Outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills, and behaviours that students acquire as they progress through the program. A graduate of the () program will demonstrate	
a.	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
b.	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
c.	An ability to communicate effectively with a range of audiences
d.	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
e.	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
f.	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
g.	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies
h.	
i.	

Responsible Persons and their Signatures:

Course Coordinator	Eng. Faten Alsaryrah	Completed Date	22/ 06 /2021
		Signature	
Received by (Department Head)		Received Date	
		Signature	