



Form: Course Syllabus	Form Number	EXC-01-02-02A
	Issue Number and Date	2/3/24/2022/2963 05/12/2022
	Number and Date of Revision or Modification	
	Deans Council Approval Decision Number	2/3/24/2023
	The Date of the Deans Council Approval Decision	23/01/2023
	Number of Pages	06

1.	Course Title	Environmental Design
2.	Course Number	0942731
3.	Credit Hours (Theory, Practical)	3
	Contact Hours (Theory, Practical)	3 hours weekly
4.	Prerequisites/ Corequisites	None
5.	Program Title	Master in Architecture
6.	Program Code	R 2005
7.	School/ Center	School of Engineering
8.	Department	Department of Architecture
9.	Course Level	Postgraduate
10.	Year of Study and Semester (s)	2023-2024 second Semester
11.	Other Department(s) Involved in Teaching the Course	None
12.	Main Learning Language	English
13.	Learning Types	<input type="checkbox"/> Face to face learning <input checked="" type="checkbox"/> Blended <input type="checkbox"/> Fully online
14.	Online Platforms(s)	<input type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams
15.	Issuing Date	25 February 2024
16.	Revision Date	25 February 2024

17. Course Coordinator:

Name: Prof Abdulsalam Alshboul	Contact
hours: 3 hours weekly	
Office number:	Phone number: 0796008937
Email: alshboul@ju.edu.jo	

18. Other Instructors:



Name: None

Office number:

Phone number:

Email:

Contact hours:

Name:

Office number:

Phone number:

Email:

Contact hours:

19. Course Description:

(0942731) Environmental Design

This course is a study of the environmental factors and the and materials. The comfort zone for human body, and the control in buildings. Means of structural control in buildings in traditional buildings by means of courtyards. Studying ex physical means of environmental control and appropriate equipment.

https://engineering.ju.edu.jo/StudyPlans/M.Sc.%20Architecture%20Engineering_Sep-2005-Fall.pdf

20. Program Intended Learning Outcomes: (To be used in designing the matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program)

- 1. Be able to analyze real environmental situations.**
- 2. Be able to coordinate multidisciplinary environmental problems.**
- 3. be able to create sustainable designs related to the built environment.**
- 4. understand the dimensions of sustainable environments.**



21. Course Intended Learning Outcomes: (Upon completion of the course, the student will be able to achieve the following intended learning outcomes)

1. understand building physics.
2. understand solar geometry and radiation and their effects upon buildings.
3. understand human thermal comfort and the methods to achieve it.
4. understand environmental design and economic, environmental and social issues.

Course ILOs	The learning levels to be achieved					
	Remembering	Understanding	Applying	Analysing	evaluating	Creating

22. The matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program:

Program ILOs / Course ILOs	ILO (1)	ILO (2)	ILO (3)	ILO (4)	ILO (5)
1					
2					
3					



4					
5					
6					
7					
8					

23. Topic Outline and Schedule:

Week	Lecture	Topic	ILO/s Linked to the Topic Learning Types (Face to Face/ Blended/ Fully Online)	Platform Used	Synchronous / Asynchronous	Lecturing	Evaluation Methods	Learning Resources
1	26/2/24 Mon.							
	28/2/2024 Wed	Introduction to the course, Syllabus, Course policies.						
2	4/3/24 Mon							
	6/3/24 Wed	The concept of Environment, Eco systems, and design. Nature of Systems and Modeling						
3	11/3/24 Mon							
	13/3/24 Wed	Architecture as a subsystem of the Environment. Fundamentals and basics of building physics.						
4	18/3/24 Mon							
	20/3/24/ Wed	Thermal Comfort, man, and Buildings.						
5	25/3/24/ Mon							



	27/3/24/Wed	Bioclimatic chart and Psychrometric charts.							
6	1/4/24/Mon								
	3/4/24/Wed	Concepts and mathematical models, and computations.							
		Moisture transfer and condensation							
7	8/4/24/Mon								
	10/4/24/Wed	Holiday							
8	15/4/24/Mon								
	17/4/24/Wed	Midterm Exam							
9	22/4/24/Mon								
	24/4/24/Wed	Solar radiation, geometry, and shading devices design							
10	29/4/24/Mon	.							
	1/5/24/Wed	Vernacular vs modern technologies. Passive solar and passive cooling (Online)							
11	6/5/24/Mon								
	8/5/24/Wed	The Ecology of Building Materials. Recycling and solid waste management							
12		.							



	13/5/24/Mon									
	15/5/24/Wed	Energy and Buildings								
13	20/5/24/Mon									
	22/5/24/Wed	Energy and Buildings								
14	27/5/24/Mon									
	29/5/24/Wed	Environmental Urban Design								
	End of lectures									
15	26/2/24 Mon.									
	28/2/2024 Wed									

24. Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	ILO/s Linked to the Evaluation activity	Period (Week)	Platform
Written examinations mid and final	70%				
Oral discussions and presentations	30%				
Research practice and implementation					
Project work and assignment					



Quizzes and lecture evaluations				
---------------------------------	--	--	--	--

25. Course Requirements:

Students should have a computer connected with the internet, notebook, AutoCAD, Revit software.

26. Course Policies:

A- Attendance policies: **Lecture attendance is obligatory; the student must attend at least 85% of the total lectures of the course.**

B- Absences from exams and submitting assignments on time: assignments must be submitted on time; otherwise the student must give an accepted excuse for submission delay.

C- Health and safety procedures: all students must comply with the safety regulations set by the University in case of lab use and constructions sites visiting if any.

D- Honesty policy regarding cheating, plagiarism, misbehavior: ethical norms must be considered, cheating is prohibited under any circumstances, plagiarism and misbehavior as well.

E- Grading policy: grading is objective under highly transparent norms and regulations; the student has the right to appeal in case of any incorrect evaluation, grading, summation of grades and any other grade related issue. The instructor is committed to correct any mistake in this regard.

F- Available university services that support achievement in the course: Internet, Computers, labs, Lighting Lab, Acoustics lab, Library and digital library.

27. References:

A- Required book(s), assigned reading and audio-visuals:


1. McKnight Tom, 1996. **Physical Geography, A landscape Appreciation**. 5th edition, Prentice Hall, New Jersey, University of California, Los Angeles.
2. McMullan Randall, 2007. **Environmental Science in Building**, 6th edition, Palgrave Publications, New York.
3. Szokolay Staven, 2007, **Solar Geometry**, Plea Notes passive and low energy architecture international, Design Tools and Techniques, University of Sydney.
4. Szokolay Steven, 2004. **Introduction to Architectural Science, the basis of sustainable design**. Elsevier, AMSTERDAM.
5. Grondzik Valter, Kwock Alison, 2015. **Mechanical and Electrical Equipment for Buildings**, 12th edition. John Wiley & Sons.



6. Chalkley J N; Cater H R, 1968. **Thermal Environment for the student of architecture**, The Architectural Press: London.
7. F. Hall. 1994. **Building services and equipment, volume 3**. Longman scientific and technical. London.

B- Recommended books, materials, and media:

28. Additional information:

Name of the Instructor or the Course Coordinator: Abdulsalam Alshboul	Signature: 	Date: ...25/2/2024..... ...
Name of the Head of Quality Assurance Committee/ Department	Signature:	Date:
Name of the Head of Department	Signature:	Date:
Name of the Head of Quality Assurance Committee/ School or Center	Signature:	Date:
Name of the Dean or the Director	Signature:	Date: