MARMARA UNIVERSITY

FACULTY OF ARCHITECTURE AND DESIGN

DEPARTMENT OF ARCHITECTURE

2026-2027 FALL SEMESTER

ARCH 3009 ENVIRONMENTAL DESIGN I

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Fridays | 09:30-12:20 | MG.7202

Syllabus

Week	Date	Time	Content	Method
1	**02 October 2026 Friday**	09:30-12:20	**Introduction**	
2	**09 October 2026 Friday**	09:30-12:20	**Passive climate control** Climate and climate elements Climatic (Environmental) comfort	Lecture
3	**16 October 2026 Friday**	09:30-12:20	**Passive climate control** Design parameters affecting energy efficiency (Site, Distances between buildings, Orientation, Building envelope, Building type, Solar control, Natural ventilation, etc.)	Lecture
4	**23 October 2026 Friday**	09:30-12:20	**Passive climate control** Site plan - Shadow analysis	Application
5	**30 October 2026 Friday**	09:30-12:20	**Passive climate control** Building envelope design considering thermal comfort	Application
6	**06 November 2026 Friday**	09:30-12:20	**Lighting** Light, Visual comfort, Daylighting and related design parameters in built environment (Windows, Room dimensions, Internal surface reflectance, Obstacles, etc.)	Lecture
7	**13 November 2026 Friday**	09:30-12:20	**Lighting** Artificial lighting systems	Lecture
8	**20 November 2026 Friday**	09:30-12:20	**Midterm Exam**	
9	**27 November 2026 Friday**	09:30-12:20	**Lighting** Transparency ratios and window design Solar control	Application
10	**04 December 2026 Friday**	09:30-12:20	**Lighting** Designing an artificial lighting system for a specific space	Application
11	**11 December 2026 Friday**	09:30-12:20	**Acoustics** Sound, Acoustic comfort, Noise control, The design of built environment for noise control	Lecture
			Assessment of noise pollution in open spaces Calculating sound transmission through the building envelope	Application
12	**18 December 2026 Friday**	09:30-12:20	**Acoustics** Room acoustics	Lecture
13	**25 December 2026 Friday**	09:30-12:20	**Acoustics** Acoustic design in an enclosed space	Application
14	**01 January 2027 Friday**	09:30-12:20	**Public Holiday: New Year's Day**	

Attendance: Students are required to attend minimum 80% of all weeks.	
Grading:	
Midterm Exam	30%
Applications before the Midterm Exam (2 applications)	10%
Applications after the Midterm Exam (4 applications)	20%
Final Exam*	40%
End-of-semester Grade	**100%**

* The date of Final Exam will be announced.