



National University of Sciences and Technology

School of Art, Design and Architecture

ARCH-413 Env. Simulation

Credit hours	3(1-2)	Semester:	Fall
Pre-requisites	ARCH 312 Environmental Design III		
Course Description	<p>Students will learn to use environmental analysis software and evaluate a building's performance at the conceptual design stage by simulating 3-dimensional models of their proposed building design with Ecotect, or Energy 10 or Design Builder. The focus will be on lighting, shading, ventilation, heating and cooling design of the building</p> <p>The students will be able to determining the energy consumption of a building by using: weather data; response factors; equipment and systems; operating schedules, occupancy patterns etc. Building simulation projects will cover design of energy efficient buildings, preparation of the models of designed buildings, testing the models with the chosen software, comparison of the thermal performance of the design under different architectural decisions on the buildings through parametric variations</p>		