

## The Effect of Window Position and Ceiling Height on Cooling Load in Architectural Studio

**Authors :** Seyedehzahra Mirrahimi

**Abstract :** This paper investigates the effect of variations in window and ceiling heights on cooling inside an architectural training studio with a full-width window. For architectural training, students use the studio more often than they use ordinary classrooms. Therefore, studio dimensions and size, and the window position, directly influence the cooling load. Energy for cooling is one of the most expensive costs in the studio because of the high activity levels of students during the warm season. The methodology of analysis involves measuring energy changes in the Energy Plus <EP> software in Kish Island. It was proved that the cooling energy in an architecture studio can be increased by changing window levels and ceiling heights to add a range of cooling energy.

**Keywords :** cooling energy, Energy Plus, studio classroom, window position

**Conference Title :** ICEEAE 2022 : International Conference on Energy Efficiency and Alternative Energy

**Conference Location :** Toronto, Canada

**Conference Dates :** June 16-17, 2022