URBAN MICROCLIMATE

The objective of the subject is to address the issues affecting design of significant places and spaces between buildings by informed knowledge.

Scales of climatic study, Urban Energy Balance, Urban Heat Island.Urban air flow.

Energy balance of Human beings in an Urban space, Microclimate design strategies in Urban space.

Thermal preferences, Application of Climatology in Urban Planning and Design.Effect of Vegetation, Materials, Tall Buildings, Daylight, Wind speed, Pedestrian Thermal comfort, safety, over shadowing, solar envelopes.

Thermal comfort in outdoor spaces, People and Open spaces, Building layout for daylight, spacing, orientation, solar access, Building form, Landscaping.

Modelling the Urban Microclimate, Case studies.

Reference resources:

1. P J Littlefair, M. Santamouris, S Alvarez and A Dupagne- (2000) "Environmental Site Layout Planning: Solar access, microclimate and passive cooling in Urban areas" – BRE Publications CRC Ltd, London
2. Robert DBrown, Terry J. Gillespie, "Microclimatic Landscape Design: Creating Thermal Comfort and Energy Efficiency", Wiley, 1995 London
3. EvyatarErell, David Pearlmutter and Terry Williamson, (2011) " Urban Microclimate: Designing the spaces between Buildings" – Earthscan, New York.

Senate

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