Energy and Climate Interactions in the Urban Environment
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• How do sustainable design choices at the **building scale** affect...
  – Building energy use
  – Indoor thermal comfort
  – Urban environment (heat island, etc.)

• Design characteristics of interest:
  – Roofs: reflectivity, vegetation, PV
  – High performance equipment & materials
  – Heating, cooling, and ventilation
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• How do sustainable design choices at the neighborhood scale affect...
  – Building interactions related to energy
  – Canyon flow/ventilation related to pedestrians and outside air for buildings
  – Urban heat island

• Design characteristics of interest:
  – Building materials
  – Building and urban canyon morphology
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- How do sustainable design choices at the **city scale** affect...
  - Urban heat island
  - Heat-related morbidity/mortality
  - Urban air quality
  - Urban scale energy consumption

- Design characteristics of interest:
  - Urban-scale reflectivity, moisture availability, and vegetation
  - Urban energy use and emissions