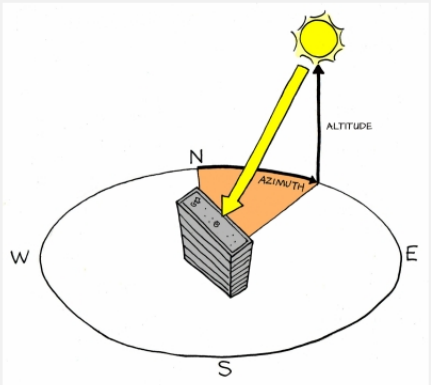
ÇANKAYA ÜNİVERSİTESİ

Arch 357 architectural design with climate

Assignment - 1

Understanding sun movement patterns can help in determining the building location and configuration. For any given spot on the site, one can draw the existing elements on the sun graph.Just as the sun path was plotted by knowing the azimuth and altitude of the sun, existing site elements can also be drawn on the graph from any one spot on the site. The diagram shows which locations on the site receive sunshine and shade. These same diagrams can be used to determine shadow patterns to be drawn in plan.



Altitude *is the vertical angle the sun makes with the ground plane (0° < alt < 90°).*

Azimuth *is the horizontal angle between the sun and true north (–180° < azi < 180°, positive in a clockwise direction from north)*

Here by this assignment, it is aimed to practice how to use sun path diagrams. The link below will help you to create a sun path diagram which belongs to one of the site that you choose. The place will be anywhere in the world; only one requirement is needed: the longitude and latitude of that place.

http://solardat.uoregon.edu/PolarSunChartProgram.html

http://www.sunearthtools.com/dp/tools/pos_sun.php

Just after you have the solar path diagram, please follow the instructions given at the link below to find out azimuth and altitude of that place in 21st of December at 14:00; and 15th of June at 12:00.

http://sustainabilityworkshop.autodesk.com/buildings/reading-sun-path-diagrams

The results will be reported in the form given below and send to **cankayamim@gmail.com . The file will be either Word document (.doc) or a .pdf. Name of the file should be your name and surname; example: veli_iyicizer.doc / veli_iyicizer.pdf**

ÇANKAYA UNIVERSITY

FACULTY OF ARCHITECTURE

DEPARTMENT OF ARCHITECTURE

ARCH 357 ARCHITECTURAL DESIGN WITH CLIMATE

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<table>
<tr><td colspan="4">The Location</td></tr>
<tr><td colspan="2">Name of the Location*</td><td colspan="2">……</td></tr>
<tr><td colspan="2">Latitude</td><td colspan="2">……</td></tr>
<tr><td colspan="2">Longitude</td><td colspan="2">……</td></tr>
<tr><td colspan="4">*Please attach created sun path diagram.</td></tr>
<tr><td colspan="4">Collected information</td></tr>
<tr><td colspan="2">21st of December at 14:00</td><td colspan="2">15th of June at 12:00</td></tr>
<tr><td>Azimuth</td><td>Altitude</td><td>Azimuth</td><td>Altitude</td></tr>
<tr><td>……</td><td>……..</td><td>……..</td><td>……</td></tr>
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