

**Title: INFLUENCE OF SOIL MOISTURE CONTENT ON LAND COVER WITHIN THE UNIVERSITY OF EMBU.**

**Student Name and Admission Number:** Emmanuel Jero Jarso: B133/11062/2014

**Supervisor: Dr. Josephine Ngunjiri**

**Abstract**

Land cover plays an important role in controlling spatial and temporal variations of soil moisture globally by influencing infiltration rates, runoff and evapotranspiration. Which is important to crop growth, vegetation restoration and water management. Three land covers will be chosen within the university, they include grass, trees and crop cover. In each plot, sites will be identified where four replicate samples will be taken at a distance of three meters. The soil samples will be collected at 15cm depths, put in bag that is sealed and taken to the lab. The samples will be dried to a constant weight in an oven and their dry weights recorded. Data obtained will be used to calculate the percentage moisture content using gravimetric method.

Results obtained from the data shows high soil water content under tree cover, followed by grass then crop. The variation can be as a result of the structure of the land cover which influences the availability of soil water. When the means and standard error of the soil water content for each land cover was calculated using statistical analysis and a bar graph of mean soil water against each land cover was plotted, it is noted that there is no significance difference between the soil moisture content, which is as a result of high precipitation experienced during the study period.

