Stat 141 (Experimental Designs 1)

1st Semester AY 2025-2026

Laboratory Exercise 2

The percentage moisture content is determined for ten samples for each of four different soils. The data is given below.

Soil A	Soil B	Soil C	Soil D
12.8	8.1	9.8	16.4
13.4	10.3	10.6	8.2
11.2	4.2	9.1	15.1
11.6	7.8	4.3	10.4
9.4	5.6	11.2	7.8
10.3	8.1	11.6	9.2
14.1	12.7	8.3	12.6
11.9	6.8	8.9	11.0
10.5	6.9	9.2	8.0
10.4	6.4	6.4	9.8

1. Construct the analysis of variance table and test the hypothesis that there is no variation of soil moisture content between different soils.

2. Check whether or not the following assumptions are met. Use both graphical, if possible, and formal tests.

   a) Normality

   b) Homogeneity of variances

   c) Independence