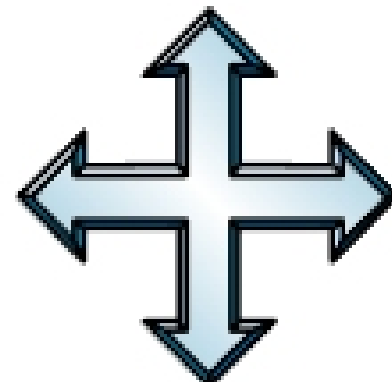


Statistical Techniques I

EXST7005

Factorial Treatments & Interactions



The Factorial Treatment Arrangement

- Also known as "two-way" ANOVA
 - ➔ This analysis has two (or more) Treatments, for example treatment A with two levels (a1 and a2) a treatment B with two levels (b1 and b2).
 - Each level of one treatment occurs with each level of the other treatment (cross-classified)
 - e.g. a1b1, a1b2, a2b1, a2b2
 - Each treatment may be fixed or random (independently)

The Factorial Treatment Arrangement (*continued*)

- Combinations of treatments are assigned at random to experimental units, so the design is still a CRD (there are 4 combinations in the example given (a1b1, a1b2, a2b1, a2b2))
- The treatment arrangement is called a "factorial" and the dimensions are usually given as 2 by 2 (above), 2 by 3, 3 by 3, etc.