Two fundamental types of repeated measures are common. Repeated measures in time is a situation in which experimental units receive a treatment, and then are simply followed with repeated measures on the response variable over several times. In contrast, experiments can involve administering all thre treatment levels (in a sequence) to each experimental unit. This type of a repeated measures study is a cross-over design. Cross-over designs need to use a wash-out period ¬ between treatment applications to prevent (or minimize) carry-over effects. Carry-over effects occur when the application of one treatment affects the response of the next treatment applied in the cross-over design. The coding for analysis of cross-over designs are very similar to repeated measures in time, with the addition of a ‘sequence’ variable added initially to our model to test for the presence of carry-over effects.

Script