



Cramming Sam's Tips for Chapter 15: Mixed design ANOVA (GLM 5)

Mixed ANOVA

- Mixed ANOVA compares several means when there are two or more independent variables, and at least one of them has been measured using the same entities and at least one other has been measured using different entities.
- Test the assumption of sphericity for the repeated-measures variable(s) when they have three or more conditions using Mauchly's test. If the value in the column labelled *Sig.* is less than .05 then the assumption is violated. You should test this assumption for all effects (e.g., if there are two or more repeated-measures variables, test the assumption for all variables and the corresponding interaction terms).
- The table labelled *Tests of Within-Subjects Effects* shows the results of your ANOVA for the repeated-measures variables and all of the interaction effects. For *each* effect, if the assumption of sphericity has been met then look at the row labelled *Sphericity Assumed*. Otherwise, read the row labelled *Greenhouse-Geisser* or *Huynh-Feldt* (read the previous chapter to find out the relative merits of the two procedures). Having selected the appropriate row, look at the column labelled *Sig.* If the value is less than .05 then the means are significantly different.
- The table labelled *Tests of Between-Subjects Effects* shows the results of your ANOVA for the between-group variables. Look at the column labelled *Sig.* If the value is less than .05 then the means of the groups are significantly different.
- Break down the main effects and interaction terms using contrasts. These contrasts appear in the table labelled *Tests of Within-Subjects Contrasts*. Again look at the columns labelled *Sig.* to discover if your comparisons are significant (they are if the significance value is less than .05).
- Look at the means, or better still draw graphs, to help you interpret the contrasts.