

11.5: Chapter 11 Summary

This lesson introduced us to the topic of repeated measures designs. The focus was on repeated measures in time where each experimental unit is assigned to exactly one treatment level the response is observed over several time periods. This means that the responses from the same experimental unit observed over time can be correlated and the model assumption of independent observations is no longer valid. Therefore, an appropriate covariance structure should be imposed to account for the correlated nature of the response, and the best is chosen based on fit statistics. Note that the AR(1) covariance structure is a possible choice only when time intervals are equally spaced. If time intervals are unequal $sp(pow)$ has to be the alternative.

Other scenarios can result in repeated measures, not necessarily in time. The important feature is that multiple measurements are being made on the same experimental unit. A special case of this is the cross-over design wherein the treatments themselves are switched on the same experimental unit during the course of the experiment. This would be the topic of the next lesson.

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