

## 11.1: Historical Methods

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Repeated measures in time were historically handled in either a multivariate analysis setting or as a univariate split-plot in time. The focus in this course is limited only to the latter.

A split-plot in time approach looks at each subject (experimental unit) as the main plot (receiving treatment) and then is split into sub-plots (time periods). Historically, the default assumption in split-plot in time data analysis has been that the correlations among responses at different time points are the same for all treatment levels and time points (compound symmetry). However, depending on the study and nature of data, other correlation structures can be more appropriate (e.g. autoregressive lag 1).

Most of the current software facilitates the inclusion of different correlation structures which has helped in the evolution of methodology for repeated measures to accommodate the presence of different correlated structures in residuals.

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