

regression equation, analysis of variance table, overall and partial F tests.

5. The General Linear Model

Multiple regression and analysis of variance as special cases of the general linear model. The general procedure for constructing F-tests by fitting restricted models. Applications to analysis of covariance and comparison of two regression models.

6. Correlations: Multiple, Partial and Multiple-Partial

Correlation matrix, multiple correlation coefficient, the multivariate normal distribution, partial correlation coefficient, F-tests for multiple and partial correlations.

7. Analysis of Residuals

Checking the assumptions of the regression and analysis of variance models, effects of departures from the assumptions, transformations of the response and predictor variables.

Grading

Participation	5%
Assignments	15%
Midterm	30%
Final	50%

Materials

R can be accessed via Jupyter, an online platform, at <https://sfu.szygy.ca/>. Alternatively, R Studio and R statistical software can be downloaded free of charge from <https://www.rstudio.com/> and <https://cran.r-project.org/>, respectively.

STAT2: Building Models for a World of Data. Author: Ann R. Cannon. Publisher: Freeman
ISBN: 978-1-4641-5047-0

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