

## **Longitudinal Data Analysis**

1. Introduction of longitudinal studies and data exploration.
2. Linear models for longitudinal data.
3. Generalized linear models for Longitudinal data.
4. Marginal, random effects, and transition models.
5. Missing values in longitudinal data.
6. Joint modelling of longitudinal and time-to-event data.

### **References:**

1. Diggle, P.J., Heagerty, P., Liang, K. Y., and Zeger, S. L. (2002). Analysis of Longitudinal Data. Oxford.
2. Davis, C. S. (2002). Statistical Methods for the Analysis of Repeated Measurements. Springer.

### **Evaluation:**

Homework: 50%    Final Project: 50%