

HOME ASSIGNMENT 2

The home assignment consists of 3 parts (below), which all should be answered. The home assignment is due on Friday, April 1, 2005. It is worth 15% of the course mark. All aids except personal assistance are allowed.

Chapter 11 in the 2nd edition of the monograph *Analysis of Longitudinal Data* is a new chapter; it is described in the book to “describe recent methodological developments which integrate the different approaches”. The different approaches in question are marginal, random effects, and transitional approaches for discrete repeated measures.

Part 1

Read the chapter, and try to understand as much as possible of it on your own. Skip over details that are not essential to the understanding. You are allowed to ask me to explain (major) problems or questions, but that may be at the cost of a reduction in the mark of the assignment. Having read the chapter, write a two-page summary of the most important recent developments in the field. Focus the summary on what you consider the essentials, rather than trying to make it complete or very detailed. The summary must be written in your own words, so large portions of copied text from either the textbook or other sources are strictly forbidden.

Part 2

Select at least two references cited in the text that you consider as key references (justify your choice), and that are accessible at the UPEI library or in an electronic version. Give a summary of each paper of at most one page. The summaries should include key findings and recommendations, as well as an explanation of any sample analyses included (e.g., type of dataset, analyses performed etc.).

Part 3

Use the software you’re familiar with (R, Stata, MLwiN) to reproduce the results shown in Tables 11.1–6 for the two examples (note that the Madras schizophrenia data can be found via the link on the homepage). Give computer code or descriptions of your analyses, and report any differences observed to the textbook tables. In case some analyses are not easily reproducible from the software, explain briefly the reasons.