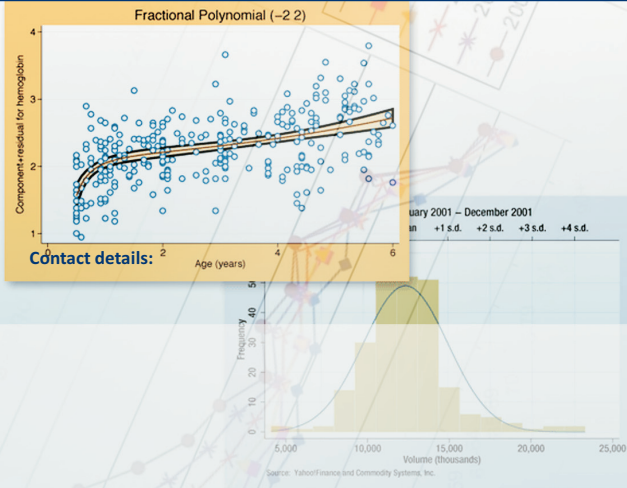




Summer School in Biostatistics

Presented at the University of Pretoria
By the School of Health Systems and Public Health (SHSPH), University of Pretoria

From 4 - 15 October 2010



Contact details:

REGISTRATION AND ENQUIRIES

Fiona Medeiros

Tel: +27 (0) 12 420 4152

Fax: +27 (0) 866 364 538

Cell: +27 (0) 83 262 2668

E-mail: fiona.ce@up.ac.za

ENQUIRIES REGARDING CONTENT

Professor Paul Rheeder

Cell: +27(0) 82 779 3054

E-mail: paul.rheeder@up.ac.za

Inviting all researchers in clinical medicine, epidemiology, community health and biomedical or bioveterinary sciences!

The Summer School in Biostatistics is aimed at both new as well as experienced medical researchers.

For new and young researchers the first week will focus on an introduction to Biostatistics as well as an introductory course in using STATA 11 software.

For more advanced researchers interested in Bayesian analysis there will be a 2 day course in the first week and a course on repeated measures/mixed model analysis in the second week.



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Programme:

Week 1: 4 to 8 October 2010

Basic Biostatistics for Medical Researchers

Monday and Tuesday: 8:30-16:00

This will be an introductory course aimed at new researchers and clinicians involved in biomedical research. The course will cover basic concepts like distributions, descriptive statistics, hypothesis testing and confidence intervals, statistical tests for comparing groups, regression analysis and sample size planning. The course will focus on principles and exercises not requiring the use of statistical software. **Presenters:** Prof Paul Rheeder (Head of Division of Clinical Epidemiology and the Epidemiology and Biostatistics Track at the SHSPH) and Loveness Dzikiiti (Biostatistician, SHSPH). **Course fee:** R2 400

Hierarchical Bayesian Data Analysis in Biostatistics with WinBUGS

Monday and Tuesday: 8:30-16:00

This workshop is aimed at more advanced researchers in medicine and epidemiology or other relevant fields eg. Ecology. The course will focus on the following:

- (a) Focus on basic elements of Bayesian inference;
- (b) Introduce several example data and the use of WinBUGS software;
- (c) Introduce Bayesian computational tools (Markov Chain Monte Carlo methods: the Gibbs Sampler and Metropolis-Hastings algorithms);
- (d) cover the use of Bayesian hierarchical models in the analysis of epidemiological and biomedical data, for example, longitudinal, spatial and disease mapping data; and
- (e) Perform hands-on experience of data analysis using WinBUGS (participants are required to bring their own laptops).

Presenter: Dr Samuel OM Manda PhD, Senior Specialist Statistician, Biostatistics Unit, SA-Medical Research Council, Pretoria, South Africa. **Course fee:** R2 400

Analysis of biomedical data using STATA

Wednesday to Friday: 8:00-16:00

This will be an introductory course of STATA 11 (with computer practicals). The course will cover data entry and importing, data manipulation, statistical tests (parametric and non-parametric), introduction to regression (linear, logistic regression, poisson and Cox proportional hazards).

Presenters: Prof Paul Rheeder (Head of Division of Clinical Epidemiology and the Epidemiology and Biostatistics Track at the SHSPH), Prof BV Girdler-Brown (senior lecturer SHSPH) and Loveness Dzikiiti (Biostatistician, SHSPH).

Course fee: R3 500

Week 2: 11-15 October 2010

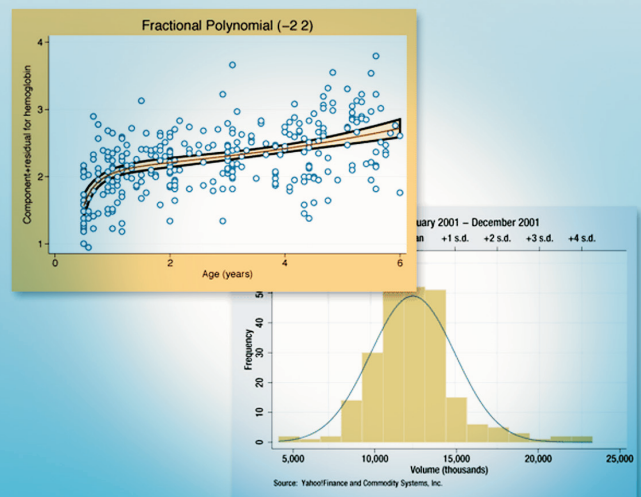
Repeated Measures in Clinical Studies using SAS and STATA

Monday to Friday: 8:30-16h00

This course will focus on the analyses of repeated measures data such as longitudinal cohort studies or clinical trials. First an overview of classical approaches to repeated measurements will be given, and, since all modern methods are likelihood based, a review of likelihood theory is given. Then modern methods are introduced such as the General Linear Mixed Model, random effects models and the generalized estimating equations (GEE) approach. Examples of clinical and epidemiological applications will be given. In computer practicals, the procedures Proc Mixed, Proc Genmod and Proc Nlmixed of the SAS statistical package are used to acquire hands on experience in applying these techniques to real data (and xtmixed and xtgee in STATA). **Presenter:** Prof. Dr. Emmanuel Lesaffre from the Dept of Biostatistics, Erasmus University, Rotterdam, the Netherlands. **Course fee:** R5 000

Bibliography:

Prof Lesaffre has a joint appointment in Erasmus University and the Catholic University of Leuven. He is a renowned biostatistician and teaches frequently on courses related to repeated measures, and Bayesian statistics. He is a past President of the International Society for Clinical Biostatistics.



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