



ANNOUNCING A SHORT COURSE

2-5th August 2016

Namibia University of Technology, Windhoek, Namibia

Introduction to Statistical Modelling – a data-based approach:

Past participants: "Even if I only take home a fraction of what I've learned I've definitely benefited" "I finally understood many concepts I hadn't before. I enjoyed the real-life examples too as they put statistics into context"

Following on from several successful previous workshops over the last seven years and due to popular demand, a workshop team from the University of St Andrews ([CREEM](#)), in conjunction with the [ACCESS](#) programme, the Namibian University of Technology ([NUST](#)) and the Southern African Institute of Environmental Assessment ([SAIEA](#)) and the will host a 4 day workshop to introduce participants (open to all) to basic statistical modelling techniques. The course will be heavily practical based (using real data examples), working directly with statistical software.

This 4 day course is taught using methods that can be widely applied but is illustrated using an Environmental Impact Assessment case study (using a large scale offshore windfarm). This course starts at a very basic level and covers the following:

- Exploratory data analysis: graphical illustrations (e.g. histograms, boxplots etc)
- Summary statistics, the basics of parameter estimation and inference (e.g. means, medians, variances)
- Confidence Intervals, Hypothesis Testing (including *t*-tests and ANOVAs)
- Models for continuous response data:
 - Multiple linear models: including model specification, fitting, selection, assessment and interpretation (with a particular focus on interpretation)
- Models for count data and models for binary responses (e.g. presence/absence data):
 - Generalized Linear Models (GLMs): including model specification, selection, fitting, diagnostics and interpretation. Accounting for overdispersion will also be covered.
- Models for correlated data:
 - Generalized Estimating Equations (GEEs): including model specification, selection, fitting, diagnostics and interpretation.

The **R** software package will be used for workshop-based practicals but all code will be provided and no prior experience with the **R** package is assumed.

Those with laptops are advised to download both the free **R** package (<http://cran.r-project.org/>) and **R-Studio** (<http://www.rstudio.com/ide/download/>) before arrival but all files required will be provided.

There will be no tuition fee charged for the course (it's free) however a registration fee of \$N500 (equivalent to Rand or USD33.3) to cover catering and printing costs will be required. Accommodation and travel costs will also be the responsibility of participants (assistance with booking may be provided). Prospective participants are invited to apply to attend the course by following this link (**Deadline 30 June 2016**): <http://goo.gl/forms/P2FnbDVktMLDK3Mv1>

Successful applicants will be informed by email where after proof of payment to secure your place will be required.