



UNIVERSITY OF THE  
WITWATERSRAND,  
JOHANNESBURG

**ANNOUNCEMENT OF A SHORT COURSE**  
**R Software Fundamentals with Applications to Statistical Analyses & Modelling**  
**17-21 July 2017**  
**Wits University, Johannesburg**

The School of Statistics and Actuarial Science (SSAS) at Wits University, in collaboration with the DST-NRF CoE-MaSS, will be holding a short course to familiarise delegates with the open-source statistical software, R, in addition to its use as a statistical analysis, modelling and interpretation tool.

This 5-day short course, although not assessed, is regarded by the University as **NQF Level 5**. It will be taught using methods and various (real) case studies that can be applied more widely. Delegates may also bring their own data for analysis. Examples of topics that may be covered include:

- R software skills
  - Software sources, packages, installation and help facilities
  - Import and export of data, and interaction with databases and other statistical software
  - Data types, frames, lists and factors
  - Data clean-up and manipulation, amongst others incorporating combining & subsetting, functions, operations & transformations (vectors and matrices included)
  - Variable and observation selection or exclusion
  - Graphing and graphical types & options
- Statistical techniques
  - Exploratory Data Analysis (EDA), summary statistics and graphical representations of data
  - General statistical inference and estimation (e.g., confidence intervals and hypothesis tests)
  - Contingency tables and goodness-of-fit
  - Analysis of Variance (ANOVA) and related techniques
  - Regression, General Linear Models (GLMs) and Multivariate Analysis
  - Data Mining and Machine / Statistical Learning

Computer laboratory machines will be used but those wanting to work on their own laptops for the workshop-based practical sessions will be required to have installed the relevant R and allied software onto their personal laptops beforehand. Basic programming experience and some exposure to the R package would be advantageous, albeit not essential.

**Places are limited** and will be allocated on a **first-come, first-served** basis. The fillable PDF application form—available from [www.wits.ac.za/stats/events](http://www.wits.ac.za/stats/events)—should be completed and submitted together with the supporting documentation requested to [Linda.McRae-Samuel@wits.ac.za](mailto:Linda.McRae-Samuel@wits.ac.za) and [Edith.Mkhabela@wits.ac.za](mailto:Edith.Mkhabela@wits.ac.za).

Provisional acceptance and an invoice will then be sent to successful applicants. No refunds or substitutions allowed. The **registration fee** for official staff or (postgraduate) students registered for 2017 at a recognised South African institution of higher learning is **R2500** (South African Rands) per person, and **R5000** per person for all other delegates. Accommodation and travel costs will be the responsibility of participants.

After proof of payment is received, registration will be confirmed, and further information requested (e.g., special dietary requirements, vehicle details) and provided (directions, parking, accommodation possibilities).

Prospective participants may send queries to Linda or Edith by email to the above addresses, or by calling them on +27 (0)11 717-6266 or +27 (0)11 717-6272 respectively.