Statistical Consulting Centre

Statistics for Research Workers (using R)
14 - 21 February 2018
Enrolment form for fee-paying participants

Title: _____ **First Name:** _____ **Surname:** _____

Employer: _____

Department: _____

Postal address: _____ **Postcode:** _____

Telephone: _____ **Fax:** _____ **Mobile:** _____

Email: _____

Places in the course will be allocated on a first-come-first-served basis, with preference given to those who have previously expressed interest

Please see the attachment for further information, including course dates, content and pre-requisites.

_____ _____

Signature Date

Course Fees:

Total Owing (GST incl) Full:$1485.00

UOM PG Student: $1100.00 Student ID: _____

Method of Payment:

☐ Please send an internal charge-out for **$1350/$1000** (GST excl) to _____ (Dept Number).

Or Full accounting string:_____

Finance person:_____ Email:_____

☐ Cheque for **$1485/$1100** (GST incl), payable to Statistical Consulting Centre, enclosed.

☐ Please send/fax me a tax invoice for **$1485/$1100** (GST incl).

Name and address for tax invoice, if different from above:

☐ Credit card payment: Amount: **$1485/$1100** (GST incl)

To Pay by credit card you need to go online at:

http://ecommerce.science.unimelb.edu.au/product.asp?pID=57&cID=12&e=1

Payment is required to confirm enrolment.

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Statistics for Research Workers

A course of the Statistical Consulting Centre, University of Melbourne

This course is an introduction to statistical methods. The course will cover:

- Descriptive statistics; graphs, tables, summary statistics. Introduction to R.
- Introduction to estimation and confidence intervals.
- The normal distribution; means and variances of sums of random variables; the Central Limit Theorem; the normal approximation to the binomial distribution.
- Confidence intervals for means and proportions.
- Introduction to hypothesis testing.
- Tests for differences in location between two populations with matched samples: sign test, Wilcoxon signed-rank test, *t*-test. The relationship between confidence intervals and hypothesis testing.
- Tests for differences in location between two populations with independent samples: *t*-test.
- Testing for difference in location of more than two populations. Analysis of variance (F-test), multiple comparisons.
- Two-way classifications: analysis of variance (F-test), interaction.
- Determination of sample size.
- Design of experiments: randomization, blocking, replication, confounding. Standard designs.
- Correlation and straight line regression.
- Multiple regression.
- Analysis of categorical data; contingency tables.

Course structure: Dates: Wednesday 14 February to Wednesday 21 February 2018. The course is deliberately arranged so that there is a weekend break in the middle. The first session of the day will commence at 9:15 a.m. and the final session will end at approximately 4:45 p.m. The sessions will mix lecture presentations with practical work using software; tutorial help will be liberally available.

Registration is at 9 am on the first day.

A full set of notes will be provided. Morning and afternoon teas are included; lunches are not included. A certificate on completion can be provided on request.

Venue: The course will be held in the Wilson Computer Laboratory in the Department of Mathematics and Statistics, Richard Berry Building; more details will be supplied in your acceptance letter. Parking within the University grounds will *not* be available.

Prerequisites: There are no formal prerequisites though it is expected that most participants will have studied mathematics at VCE level, or equivalent. **Participants need to be comfortable with a limited amount of mathematical notation.** The onus is on participants to check that the course suits their needs. Please do this carefully.

Course presenters: Associate Professor Ian Gordon, the Director of the Statistical Consulting Centre and Dr Sue Finch, who have given many similar courses previously.