

Statistical Consulting Centre
Statistics for Research Workers using R
and R Markdown
15 February to 12 March 2021 (Online)
Enrolment form for fee-paying participants



Title: _____ First Name: _____ Surname: _____

Employer: _____

Department: _____

Address: _____ Suburb: _____ 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: _____ Finance 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.

Statistics for Research Workers using R and R Markdown

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.

You can expect to spend an average of 3 hours per day on the course. There will be a mix of pre-recorded lectures, live Q&A (via Zoom) with course presenters and Zoom tutorial sessions. Lecture material is pre-recorded to support flexibility in online learning.

Lectures

On Mondays and Thursdays, pre-recorded lecture material will be provided. On average there are 2.5 hours of lectures on these days.

Live Q&A

At 4:30 on Mondays and Thursdays, there will be live Q&A with the course presenters to follow up on any questions you have about the pre-recorded lectures.

Tutorial sessions

On Tuesdays and Fridays, there will be 2-hour tutorial sessions where practical work using software can be done with the support of experienced tutors. The tutorials are planned to start at 10am.

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

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