



Title:		Full Name:	
Employer:			
Department:			
Address:			
Suburb:		Postcode:	
Email:			
Telephone:		Mobile:	

You will need to show proof of vaccination on entering the Computer Lab and QR code on entering the building. The University of Melbourne COVID-19 conditions will apply. [COVID-19 Vaccination Requirements Policy](#).

Signature:		Date:	
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Course fees	Full	\$1485	
	UoM GR student	\$1100	Student ID

Internal billing (within the University):

<input type="checkbox"/>	Internal transfer of funds	Staff \$1350	<input type="checkbox"/>	UoM Student \$1000	<input type="checkbox"/>
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Full Themis account string								
Finance person:		Finance email:						

External billing:

<input type="checkbox"/>	Tax invoice	External party fee includes GST \$1485
	Name/Company	
	Address	

<input type="checkbox"/>	To pay by credit card, go here:	<a href="https://ecommerce.unimelb.edu.au/science/product.asp?pID=24&amp;cID=12">https://ecommerce.unimelb.edu.au/science/product.asp?pID=24&amp;cID=12</a>
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# Statistics for Research Workers using R and R Markdown

*A course of the Statistical Consulting Centre, University of Melbourne*

**Wednesday, 23 November to Wednesday, 30 November 2022**

(face to face)

This course provides an introduction to foundational statistical methods and ideas used throughout statistics and data science. It uses R statistical software with RStudio and R Markdown. You will gain experience in the use of R as part of the course, but the focus is on statistical methods including:

- Measurement and study design
- Data summaries and data visualization
- Understanding distributions: the Normal distribution and the binomial distribution
- Central Limit Theorem and its application
- Foundations of statistical inference: estimation and confidence intervals, hypothesis testing
- Simple analytic methods for numerical outcomes: paired samples and independent samples
- General linear model for numerical outcomes, including analysis of variance and linear regression
- Simple analytic methods for categorical data based on contingency tables
- General analytic method for binary outcomes: logistic regression
- Principles of the design of experiments, including determination of sample size

**Course structure:** Dates: Wednesday, 23 November to Wednesday, 30 November 2022. 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. A certificate on completion can be provided on request.

**Venue:** The course will be held in the Wilson Computer Laboratory in the School of Mathematics and Statistics, Peter Hall Building (160). 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:** Professor Ian Gordon, the Director of the Statistical Consulting Centre and Associate Professor Sue Finch, who have given many similar courses previously.