



MONASH
University

MONASH
BUSINESS
SCHOOL

ETC3550

**Applied forecasting for
business and economics**

Contact details

Lecturer

Professor Rob Hyndman

- Room E762, Menzies Building
- Email: Rob.Hyndman@monash.edu

Tutors

- Mitchell O'Hara-Wild
- Puwasala Gamakumara
- Sayani Gupta

Brief bio

- Professor of Statistics, Monash University
- Head, Department of Econometrics & Business Statistics
- Editor-in-Chief, *International Journal of Forecasting*, 2005–2018

How my forecasting methodology is used:

- Pharmaceutical Benefits Scheme
- Cancer incidence and mortality
- Electricity demand
- Ageing population
- Fertilizer sales

robjhyndman.com

Unit objectives

- 1 To obtain an understanding of common statistical methods used in business and economic forecasting.
- 2 To develop the computer skills required to forecast business and economic time series data;
- 3 To gain insights into the problems of implementing and operating large scale forecasting systems for use in business.

Teaching and learning approach

Two 50 minute classes and a one 80 minute computer lab session each week for 12 weeks.



Available for download from CRAN:

<https://cran.csiro.au/>



Available for download from RStudio:

<https://www.rstudio.com/products/rstudio/>

Key reference

Hyndman, R. J. & Athanasopoulos, G. (2019)
***Forecasting: principles and practice*, 3rd edition**

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Hyndman, R. J. & Athanasopoulos, G. (2019)
Forecasting: principles and practice, 3rd edition

[OTexts.org/fpp3/](https://otexts.org/fpp3/)

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- Free and online
- Data sets in associated R packages
- R code for examples

Outline

Week	Topic	Chapter
1	Introduction to forecasting and R	1
2	Time series graphics	2
3	Forecasting tools	3-4
4	Time series decomposition	7
5-6	Exponential smoothing	8
7-9	Forecasting with ARIMA models	9
10-11	Multiple regression and forecasting	6
11-12	Dynamic regression	10

Assessment

- Nine short assignments, worth 2% or 4% each.
- One project due at the end of the semester, worth 20%.
- Exam (2 hours): 60%.

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Assignments	Mon 11:59pm each week	2 or 4% each
Project	Fri 31 May	20%
Final exam	Official exam period	60%

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- Need at least 50% for exam, and 50% for total.

Moodle site

- Includes all lecture notes, handouts, assignments
- Forum for asking questions, etc.
- Assignment submissions



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- Assignment 2: all students must complete this course by Monday 11 March.



- The IIF provides a prize to the top student in this subject each year.
- US\$100 plus one year membership.