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.

R

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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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	Introduction to forecasting and R	2
3	Time series graphics & decomposition	3,6
4–5	Exponential smoothing	7
6–8	Forecasting with ARIMA models	8
9–10	Multiple regression and forecasting	5
11	Dynamic regression	9
12	Advanced methods	11

Assessment

- Nine short weekly 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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Project	Fri 31 May	20%
Final exam	Official exam period	60%

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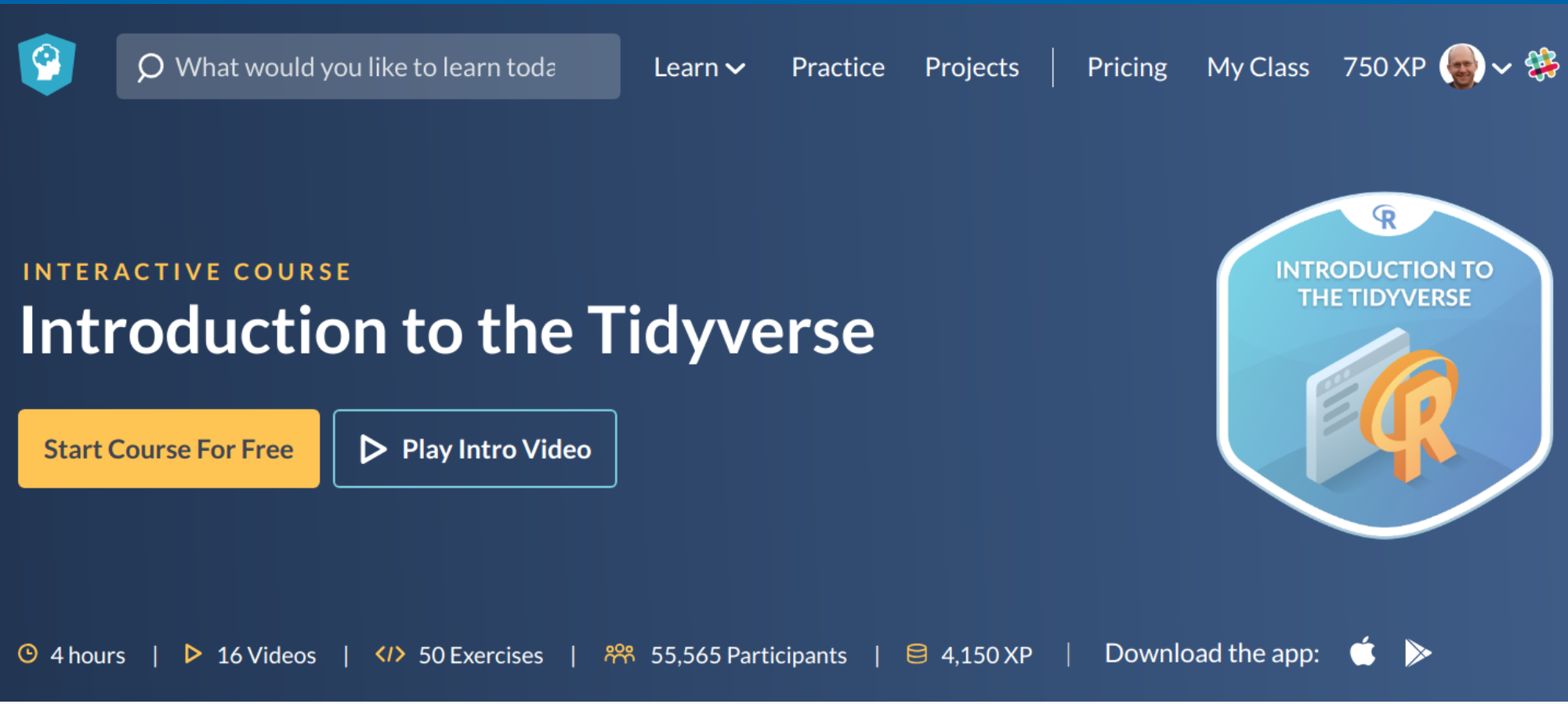
- Need at least 50% for exam, and 50% for total.

Moodle site

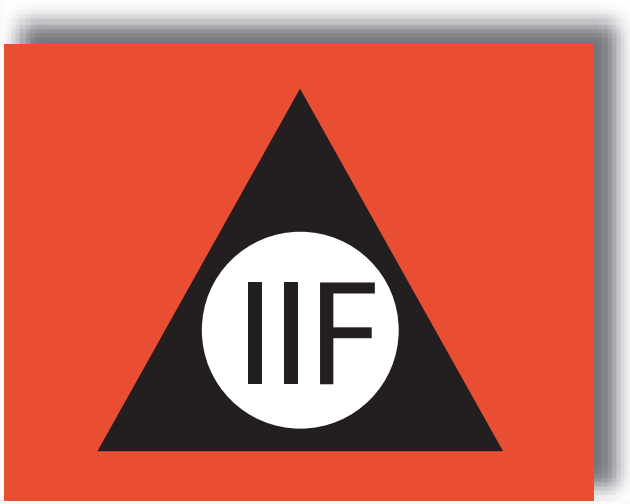
- Includes all lecture notes, handouts, assignments
- Forum for asking questions, etc.
- Assignment submissions

DataCamp



- All students must complete this course by Monday 11 March.

International Institute of Forecasters



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