

ETC3580:

Advanced

Statistical

Modelling

Subject information

Contact details

Lecturer

Professor Rob Hyndman

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

Tutor

Mitchell O'Hara-Wild

- Email: Mitch.OHara-Wild@monash.edu

Unit objectives

- 1 provide an understanding of statistical models for handling common data analysis problems
- 2 develop skills for fitting, interpreting and assessing statistical models
- 3 develop computer skills for exploring and modelling different kinds of data.

Teaching and learning approach

- Two 50 min lectures
(Mon 1.00pm; Tues 12.00pm)
- One 80 min tutorial
(Mon 2.00pm or Mon 3.30pm)



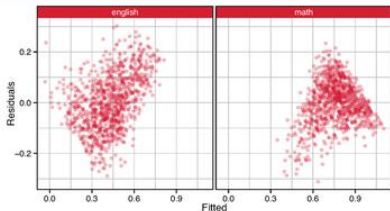
rstudio.com

Texts in Statistical Science

Extending the Linear Model with R

Generalized Linear, Mixed Effects and
Nonparametric Regression Models

SECOND EDITION



Julian J. Faraway



CRC Press
Taylor & Francis Group

A CHAPMAN & HALL BOOK



Outline

Week	Topic
1	LM Graphics for linear models and interpreting interactions
2	LM Leverage, influence, residual diagnostics
3	GLM Regression with binary responses
4	GLM Regression with binomial and proportional responses
5	GLM Regression with count responses
6	GLM Generalized linear model theory
7	GLMM Random effects
8	GLMM Panel data and hierarchical linear models
9	GLMM Mixed effects models for non-Gaussian responses
10	GAM Regression splines, additive models
11	GAM B-splines and penalized regression splines
12	GAM GAMMs

Approximate weeks only

Assessment

Task	Due Date	Value
Assignment 1	12 August	10%
Assignment 2	2 September	10%
Assignment 3	30 September	10%
Assignment 4	21 October	10%
Final exam	Official exam period	60%

Assessment

Task	Due Date	Value
Assignment 1	12 August	10%
Assignment 2	2 September	10%
Assignment 3	30 September	10%
Assignment 4	21 October	10%
Final exam	Official exam period	60%

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

THE SMARTEST WAY TO

Learn Data Science Online

The skills people and businesses need to succeed are changing. No matter where you are in your career or what field you work in, you will need to understand the language of data. With DataCamp, you learn data science today and apply it tomorrow.

Start Learning For Free

 python   SQL  spark

 git  Shell  SPREADSHEETS

Create Your Free Account



LinkedIn



Facebook



Google+

or



Email address



Password

Get Started

FOR INDIVIDUALS

FOR BUSINESSES