MATH 2011 MAKING SENSE OF DATA

Credit Points 10

Legacy Code 301032

Coordinator Neil Hopkins (https://directory.westernsydney.edu.au/search/name/Neil Hopkins/)

Description The subject builds on the basic statistical concepts introduced in first year, and also prepares students for broader application of statistics for those majoring in science or business. Topics include hypothesis testing; analysis of categorical data; analysis of variance; non-parametric methods; re-sampling (cross validation/bootstrapping); Introduction to visual data analysis; simple Multivariate statistics and sampling and design.

School Computer, Data & Math Sciences

Discipline Statistics

Student Contribution Band HECS Band 1 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 2 subject

Pre-requisite(s) MATH 1028 OR
MATH 1003 OR
MATH 1030

Assumed Knowledge

Basic Statistics.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Apply the fundamentals of statistical hypothesis testing;
2. Use analysis of variance methods to solve practical problems;
3. Utilize re-sampling methods to analyse data (cross validation / bootstrapping);
4. Employ statistical analysis of data using simple multivariate statistics;
5. Introduce the area of visual data analysis;
6. Implement the above statistical methods using R.

Subject Content

1. Hypothesis Testing
2. Sampling and Design
3. Nonparametric Methods
4. Simple Multivariate Statistics
5. Re-Sampling
6. Introduction to visual data analysis

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task
Short Answer	60 minutes (Including upload time)	20	N	Individual
Short Answer	60 minutes	20	N	Individual
Practical Exam	60 minutes (including upload time)	20	N	Individual
Short Answer	60 minutes	20	N	Individual
Poster	To consist of 5 or so pages of text and computer output, equivalent to approx. 2000 words as a poster presentation	20	N	Group
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Final Exam	2 hours	40	N	Individual
Final Exam	2 hours	40	N	Individual

Prescribed Texts

- Field, A. P., Miles, J., & Field, Z. (2012). Discovering statistics using R. Thousand Oaks, Calif: Sage.

Teaching Periods

Spring (2023)

Campbelltown

On-site

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View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=MATH2011_23-SPR_CA_1#subjects)

Parramatta - Victoria Rd

On-site

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Spring (2024)

Campbelltown

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