

Data Analytics

Module Information

2022.01, Approved

Summary Information

Module Code	5524COMECA
Formal Module Title	Data Analytics
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Education Centre of Australia Pty Ltd

Learning Methods

Learning Method Type	Hours
Online	44

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-PAR	PAR	January	12 Weeks

Aims and Outcomes

Aims	To develop a theoretical knowledge of statistical skills to solve data science problems. To develop and display solutions to data science problems by applying statistical theory using appropriate software applications.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Apply appropriate statistical theory to data science problems to derive meaningful solutions.
MLO2	2	Apply appropriate data analysis techniques in a suitable software application.

Module Content

Outline Syllabus	Purpose of statistics Assumption testing e.g. Normality Multivariate normality, Homoscedasticity etc. Correlations Cluster analysis Non-parametric tests – Chi Square, Two-way Chi Square ANOVA and T-tests Linear Modelling - Simple Linear Regression, Multiple Linear Regression, Logistic Regression, Poisson Regression Decision trees, Random Forests Nonlinear Models, Generalized Linear Models Akaike Information Criteria (AIC)
Module Overview	
Additional Information	This module explores statistical techniques through practical, hands-on data analysis.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Case study analysis	100	0	MLO1, MLO2

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Mark Taylor	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings