LIVERPOOL JOHN MOORES UNIVERSITY

Module Proforma

Approved, 2022.02

Summary Information

Module Code	5224COMP
Formal Module Title	Data Analytics
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Module Contacts

Module Leader

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

Module Team Member

Contact Name	Applies to all offerings	Offerings
Denis Reilly	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings

Teaching Responsibility

LJMU Schools involved in Delivery
Computer Science and Mathematics

Learning Methods

Learning Method Type	Hours
Lecture	22
Practical	22

Module Offering(s)

Offering Code	Location	Start Month	Duration
JAN-CTY	CTY	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.

Learning Outcomes

After completing the module the student should be able to:

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

Module Content

Outline Syllabus
Purpose of statisticsAssumption testing e.g. Normality Multivariate normality, Homoscedasticity etc. CorrelationsCluster analysisNon-parametric tests – Chi Square, Two-way Chi SquareANOVA and T-testsLinear Modelling - Simple Linear Regression, Multiple Linear Regression, Logistic Regression, Poisson RegressionDecision trees, Random Forests Nonlinear Models, Generalized Linear Models Akaike Information Criteria (AIC)

Module Overview
This module allows you to explore statistical techniques through practical, hands-on data analysis. You will develop a theoretical knowledge of statistical skills to solve data science problems and display solutions to data science problems by applying statistical theory using appropriate software applications.

Additional Information
This module explores statistical techniques through practical, hands-on data analysis.

Assessments

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