

# AMITY GLOBAL INSTITUTE

## MODULE SYLLABUS

Course	Master of Science Data Science Awarded by Teesside University
Module Title	Statistical Methods for Data Analytics
Module Syllabus No. (if any)	CIS4027-N
Content	By taking this module you will develop necessary knowledge and practical understanding of the main statistical techniques. Both Quantitative and Qualitative data analysis techniques will be covered, reflecting scientific and social science methods. It will specifically focus on correlation testing, regression, data categories, normalization i.e. the tools needed, rather than the philosophical approaches. You will understand how to apply valid techniques and interpret the results in preparation for experimental work.
No. of Teaching Hours	12X3=36 hours
Teaching Methods	Lectures and demonstrations.
Assessment Methods and Weightages	The module will be assessed by a single ICA (100%) requiring students to consider a number of case studies and evaluate/synthesise knowledge in order to identify the correct data analysis and modelling process.
Skills for Maximising Learning Outcomes	Reading and Research
Dates of Examinations, Major Assessments and Assignments	See University Academic Calendar
Recommended Text	Statistics 9788130915876 Freedman, David 2011 - 4th ed
Additional Reference Texts (if any)	
Additional Remarks (if any)	

No.	Learning Outcomes/Aims
1	Use own judgement to select, with justification, a valid statistical method in the context of the research project and take full responsibility for the consequences and impact of decisions.
2	Manage complex data within the application of data analysis software in order to run tests and present/defend results.
3	Analyse complex related and unrelated data sets using a range of methods.
4	Critically analyse and interpret outcomes of statistical tests in order to identify patterns and significance levels.
5	Critically appraise the validity and reliability of the methods available
6	Demonstrate an ethical understanding of data analysis and its affect in a wider social context.
7	Explore a range of statistical techniques in order to conduct hypothesis testing, confidence intervals and significance testing. Provide methods to interpret results of experimental work in order to inform a set of conclusions.
8	Demonstrate how to run case-specific statistical analyses and regression-based tests to understand interactions between data variables.

Note: All Information provided to Amity will be kept strictly confidential except for those required under statutory requirements and by government authorities and relevant university partners and accreditation bodies as part of the regulatory or course requirements.