

H8HRAQM: HR Analyticsand Quantitative Methods

Module Code:	H8HRAQM
Long Title	HR Analyticsand Quantitative Methods APPROVED
Title	HR Analyticsand Quantitative Methods
Module Level:	LEVEL 8
EQF Level:	6
EHEA Level:	First Cycle
Credits:	10
Module Coordinator:	Pauline Kelly Phelan
Module Author:	Isabela Da Silva
Departments:	School of Business
Specifications of the qualifications and experience required of staff	
Learning Outcomes	
<i>On successful completion of this module the learner will be able to:</i>	
#	Learning Outcome Description
LO1	Demonstrate a comprehensive understanding of statistical principles, theories and methods and appreciate how they apply in a range of business decision making situations.
LO2	Recognise and evaluate different types of data, quantitative and qualitative, and associated statistical measures and their appropriateness in a range of scenarios.
LO3	Understand the role of data in demonstrating return on investment (ROI) of HRM strategies and initiatives such as L&D, recruitment, reward etc.Communicate and interpret statistical findings/output in a technical and non-technical manner.
LO4	Ability to critique the concepts & theories underpinning data and analytics, design & development, evidence-based practice and critical decision-making.
LO5	Demonstrate how to translate data analysis and results into tangible predictive business applications i.e.: demonstrate the ability to use analytics to build the case for L&D and other HR initiatives.
Dependencies	
Module Recommendations	
No recommendations listed	
Co-requisite Modules	
No Co-requisite modules listed	
Entry requirements	As per programme requirements.

H8HRAQM: HR Analyticsand Quantitative Methods

Module Content & Assessment			
Indicative Content			
Overview and purpose of HR analytics and data. Types of HR metrics and data Balanced Scorecards & KPIs Strategic Workforce Planning Strategy & data driven decision-making Measuring performance & potential Human Capital reporting Linking Human Resources to ROI - financial HR, cost of absenteeism, L&D, turnover etc.			
Understanding Quantitative and Qualitative data principles and concepts Probability: The concepts and language of probability The role of probability in statistics Approaches to assigning probabilities Rules of addition and multiplication for computing probability Conditional probability			
Measures of Central Tendency Mean: Arithmetic versus Geometric Mode Median			
Measures of Dispersion Range & Mean Absolute Deviation Variance & Standard Deviation (Population and Sample) Symmetric Distributions and Skewness			
Qualitative Methods How to collect, analyse, and interpreting non-numerical data, such as language, opinions etc. Methods include; Coding Grounded theory in collecting data Narrative research how to interpret stories to understand how employees understand the organisation through their experiences and perceptions Action research that links theory and practice that can drive organisational changes			
Defining Metrics Evaluate and appraise different types of data, graphics and statistical measures and their appropriateness in a range of scenarios. Key areasinclude; Descriptiveanalyticsand use of multidimensional data Predictiveanalytics Prescriptiveanalytics Understanding qualitative and qualitative performance metrics i.e., L&D, performance, workforce planning, staff surveys etc.			
Data Overview Understanding the importance of data integrity and quality, difference of correlation and causation. Understand the concepts of various data sources - qualitative and quantitative and the importance of consistency and reliability of data inputs for reporting Understanding the importance of data integrity and quality and how to use practical techniques to assess the integrity of data and avoid common pitfalls How to analyse data Understand the theoretical concepts ofbigdata, data mining etc. Understandingofthe General Data Protection Regulation (GDPR) andethicalissuesconcerning analytics			
Role of analytics in HRMstrategy Building the business case for HR metrics How to build support amongst stakeholders Application of data analysis for business strategic goals			
Examination of key HR analytics and data How to examine, evaluate and provide insights from HR data (quantitative and qualitative) and in areas such as absenteeism, turnover, pay, legislation - gender pay gap, performance management, talent management, L&D, culture (staff surveys), employee demographics etc. How to design a data system through case studiesand practical examples			
Assessment Breakdown			%
Coursework			100.00%
Assessments			
Full Time			
Coursework			
Assessment Type:	Continuous Assessment	% of total:	100
Assessment Date:	n/a	Outcome addressed:	1,2,3,4,5
Non-Marked:	No		
Assessment Description: As a HR consultant (internal or external to the organisation) you have been requested to design a new HR metric system or review and improve an existing HR analytics system in theorganisation. Youare to advise management on the various statistical theories and methods. Additionally, you are to advise management of the process of HR data management, systems and the benefits and weakness of HR analytics. As a consultant you should consider the organisation's requirements, budgets and strategy and make recommendations that will best suit the organisation. You can take a choose specific and or a combination of HR metrics such as leadership, morale, absence management, performance management, equality, training etc. or provide a general HR analytical framework for the organisation to consider. The assessment can be based on your organisation, one familiar to you or a case study. Assessment Criteria While the focus will be on the quality rather than the quantity of content, the assignment will be 2,000 – 2,500 words maximum. Harvard protocol must be used (style and referencing). The assignment should be written in (1.5 spacing), in Arial 12 or Times New Roman 12 in justified format and submitted to via 'Turnitin'. Note that pages should be numbered. The assignment requires an application of appropriate module concepts.			
No End of Module Assessment			
No Workplace Assessment			
Reassessment Requirement			
Coursework Only <i>This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.</i>			
Reassessment Description Candidates will attempt the repeat assessment for the module, if they do not successfully pass the module. Learners are required to attempt all assessments attaching to a module. For those modules where all learning outcomes are assessable with a final examination, the learner does not have to re-sit failed individual CA components.			

H8HRAQM: HR Analyticsand Quantitative Methods

Module Workload				
Module Target Workload Hours 0 Hours				
Workload: Full Time				
Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	Classroom and demonstrations	30	Per Semester	2.50
Tutorial	Mentoring and small-group tutoring	12	Per Semester	1.00
Directed Learning	Directed e-learning	6	Per Semester	0.50
Independent Learning	Independent learning	202	Per Semester	16.83
Total Weekly Contact Hours				4.00

Module Resources	
<i>Recommended Book Resources</i>	
<p>Khan, N., Milliner, D. (2020), Introduction to People Analytics, A practical guide to data-driven HR, Kogan Page.</p> <p>Lind D.A., Marchal W.G., and Wathen S.A. (2020), Statistical Techniques in Business and Economics, 18th. McGraw Hill.</p>	
<i>Supplementary Book Resources</i>	
<p>Barends, E. and Rousseau, D. (2018), Evidence-based management: how to use evidence to make better organizational decisions, Kogan Page.</p> <p>Berenson, M., Levine, Szabat, K.A. (2015), Basic Business Statistics, Global Edition, 13th. Pearson Education.</p> <p>Ferrar, J. and Green, D. (2021), Excellence in People Analytics, How to Use Workforce Data to Create Business Value, Kogan Page.</p> <p>Field, A. (2020), Discovering Statistics Using R, 2nd. Sage Publications.</p> <p>Marler, J.H. and Boudreau, J.W. (2017), An evidence-based review of HR analytics, International Journal of Human Resource Management.</p> <p>Marr, B. (2018), Data-driven HR: how to use analytics and metrics to drive performance, Kogan Page.</p> <p>Mattox, J.R., Parsky, P. and Hall, C. (2020), Learning analytics: using talent data to improve business outcomes, 2nd ed. Kogan Page.</p> <p>Slater, N. (2017), Learning analytics explained, Routledge.</p>	
<i>This module does not have any article/paper resources</i>	
<i>Other Resources</i>	
<p>[Journal], CIPD. (2019), People Analytics factsheet, https://www.cipd.ie/knowledge/world-work /analytics/factsheet</p> <p>[Journal], CIPD. (2018), Getting started with People Analytics, A Practitioners Guide available, https://www.cipd.ie/knowledge/world-work /analytics/practitioner-guide</p> <p>[Journal], CIPD. (2017), Human capital analytics and reporting: exploring theory and evidence, https://www.cipd.co.uk/knowledge/strateg y/analytics/human-capital-analytics-repo rt</p> <p>[Journal], CIPD. (2016), In search of the best available evidence. Chartered Institute of Personnel and Development, https://www.cipd.co.uk/knowledge/strateg y/analytics/evidence-based-decision-maki ng</p>	
Discussion Note:	