



APPROVED

Awards					
Master of Science					
Programme Code:	BN_KADSA_R	Mode of Delivery:	Part Time, Distance Education	No. of Semesters:	4
NFQ Level:	9				
Programme Credits:	90				
Institute Code:	BN529R				
Department:	Computing				
Institute Code:	BN529R				
Programme Extra Information:	20 credits to be taken from electives in semester 3				

Programme Outcomes

On successful completion of this programme the learner will be able to :

PO1	Knowledge - Breadth	
	(a)	expert knowledge and understanding of: advanced theoretical and practical knowledge and skills relevant to data science including recent developments; best practices in research and its applications in data analytics and data science; and the key stages of relevant research and development methodologies.
PO2	Knowledge - Kind	
	(a)	an ability to evaluate and critically appraise data science techniques with respect to a challenging business objective, dataset or research questions; and apply a range of advanced data science techniques to address specific problems.
PO3	Skill - Range	
	(a)	interpersonal and communication skills to: discuss current challenges and research; and report on analysis results with respect to a business objective.
PO4	Skill - Selectivity	
	(a)	an ability to design and implement a data analytics solution that requires significant preliminary research for novel and unfamiliar situations; critically evaluate design and implementation issues in data science as a result of the research undertaken; exhibit research capability in a number of cutting edge areas in the fields of data science; complete a major research project.
PO5	Competence - Context	
	(a)	an ability to apply existing and develop new research skills to plan and implement a research project to solve a challenging problem in the area of data science; evaluate existing and develop new best practices in a range of real-world contexts.
PO6	Competence - Role	
	(a)	an ability to reflect on their strengths and weaknesses; recognition of the need to constantly update knowledge and skills; and an attitude based on initiative, responsibility and problem ownership.
PO7	Competence - Learning to Learn	
	(a)	Note: learning to learn is covered in competence role above
PO8	Competence - Insight	
	(a)	an understanding and appreciation of the need for quality and integrity; and an awareness of research ethics and ethical concerns arising from data analysis.

Semester Schedules

Stage 1 / Semester 1

Mandatory	
Module Code	Module Title
ADSA H6012	Business Intelligence
ADSA H6013	Algorithms for Data Science

Stage 1 / Semester 2

Mandatory	
Module Code	Module Title
ADSA H6011	Data Pre-Processing and Exploration
ADSA H6015	Data Science Applications

Stage 2 / Semester 1

Elective	
Module Code	Module Title
ADSA H6014	Text Analysis and Web Content Mining
ADSA H6016	Multimedia Mining
ADSA H6017	Geospatial Data Analysis and Knowledge Discovery
ADSA H6018	Programming for Big Data
ADSA H6019	Statistics

Stage 2 / Semester 2

Mandatory	
Module Code	Module Title
MSIT H6029	MSc Research Project - 30