BACHELOR OF DATA SCIENCE CURRICULUM

CODE	UNIT	CREDITS	PRE-REQUISITES/CO-REQUISITES
SEMESTER ONE			
BDS MAT 109	Mathematics for Data Scientists	3	NIL
BDS MAT 110	Introduction to Statistics and Probability	3	NIL
BDS BUS 101	Foundation Skills 1: Personal & Career Foundations	1	NIL
BDS CSC 101	Introduction to Computer Programming	3	NIL
BDS DSC 101	Introduction to Databases	3	NIL
	TOTAL SEMESTER ONE CREDITS	**13**	

CODE	UNIT	CREDITS	PRE-REQUISITES/CO-REQUISITES
SEMESTER TWO			
BDS MAT 103	Linear Algebra	3	NIL
BDS MAT 104	Calculus	3	NIL
BDS LIB 101	Foundation Skills 2: Ethics and Moral Reasoning	1	Foundation Skills 1: Personal & Career Foundations
BDS DSC 102	Introduction to Data Science	3	Mathematics for Data Scientists
BDS QTT 101	Statistical Data Analysis	3	Introduction to Statistics and Probability
	TOTAL SEMESTER TWO CREDITS	**13**	

CODE	UNIT	CREDITS	PRE-REQUISITES/CO-REQUISITES
SEMESTER THREE			
BDS MAT 205	Advanced Calculus	3	Calculus
BDS MAT 206	Algorithms and Data Structures	3	Introduction to Computer Programming
BDS ORG 201	Employability and Practitioner Skills Series 1: Emotional Intelligence	1	Foundation Skills 1 & Foundation Skills 2
BDS DSC 203	Data Integration and Warehousing	3	Introduction to Databases
BDS DSC 204	Visual Analytics (Explorative data analysis)	3	NIL
	TOTAL SEMESTER THREE CREDITS	**13**	

CODE	UNIT	CREDITS	PRE-REQUISITES/CO-REQUISITES
SEMESTER FOUR			
BDS MAT 208	Advanced Linear Algebra and Applications	3	Advanced Calculus
BDS CSC 202	Programming for Analytics	3	Algorithms and Data Structures
BDS HRM 201	Employability and Practitioner Skills Series 2: Leadership, Teamwork, Global Dexterity	1	Employability and Practitioner Skills Series 1: Emotional Intelligence
BDS MKT 201	Consumer Behaviour and Marketing Research	3	Introduction to Data Science
BDS CSC 203	Machine Learning	3	Introduction to Data Science
	TOTAL SEMESTER FOUR CREDITS	**13**	
SEMESTER FIVE			
BDS QTT 302	Simulation Modelling	3	Programming for Analytics
BDS DSC 305	Data Mining	3	Machine Learning
BDS COM 301	Employability and Practitioner Skills Series 3: Communicating Effectively	1	Employability and Practitioner Skills Series 2: Leadership, Teamwork, Global Dexterity
BDS DSC 306	Object Relational and NoSQL Databases	3	Data Integration and Warehousing
BDS PRO 301	Data Science Capstone Project I	3	PR: Data Integration, Warehousing; Programming for Analytics and completed any 8 subjects in addition to these specific subjects
	TOTAL SEMESTER FIVE CREDITS	**13**	
SEMESTER SIX			
BDS DSC 307	Social Web Analytics (Web, Internet of Things, and Social Media Mining)	3	Data Mining
BDS DSC 308	Advanced Analytics (Stream, Sensor and Spatio-temporal Analysis)	3	Data Mining
BDS BUS 302	Employability and Practitioner Skills Series 4: Innovation, Creativity and Agility	1	Employability and Practitioner Skills Series 3: Communicating Effectively
BDS DSC 309	Big Data Processing Techniques and Platforms	3	Programming for Analytics
BDS PRO 302	Data Science Capstone Project II	3	Data Science Capstone Project I
	TOTAL SEMESTER SIX CREDITS	**13**	
	TOTAL CREDITS	**78**	