Summary of the Courses

Table 1: Courses offered in the Semester I			
Course Code	Course Title	No of Credits	Compulsory or Elective
DS1101	Introduction to Data Science	1	Compulsory
DS1102	Programming Fundamentals	2	Compulsory
DS1103	Calculus	2	Compulsory
DS1104	Introduction to Statistics	2	Compulsory
DS1105	Database Management Systems	2	Compulsory
DS1106	Computer System Organization	2	Compulsory
DS1107	Data and Society	1	Compulsory
DS1108	Web Programming I	2	Compulsory
DS1109	Communication Skills I	-	Compulsory (Non-GPA)
DS1110	Academic Integrity	-	Compulsory (Non-GPA)
DS-EGP-1101	General English I	-	Compulsory (Non-GPA)
	Total	14	

Table 2: Courses offered in the Semester II			
Course Code	Course Title	No of Credits	Compulsory or Elective
DS2101	Operating Systems	2	Compulsory
DS2102	Data Structures	2	Compulsory
DS2103	Linear Algebra	2	Compulsory
DS2104	Object Oriented Programming	2	Compulsory
DS2105	Capstone Project in Data Science I	2	Compulsory
DS2106	Analysis of Algorithms	2	Compulsory
DS2107	System Analysis and Design	2	Compulsory
DS2108	Data Pre-Processing	1	Compulsory
DS2109	Communication Skills II	-	Compulsory (Non-GPA)
DS-EGP-1201	General English II	-	Compulsory (Non-GPA)
	Total	15	

Table 3: Courses offered in the Semester III			
Course Code	Course Title	No of Credits	Compulsory or Elective
DS3101	Probability Theory	2	Compulsory
DS3102	Regression Analysis	2	Compulsory
DS3103	Multivariate Calculus	2	Compulsory
DS3104	Real World Analytics	1	Compulsory
DS3105	Computer Networking	2	Compulsory
DS3106	Data Warehousing	2	Compulsory

DS3107	Web Programming II	2	Compulsory
DS-EAP-2101	Academic English I	-	Compulsory (Non-GPA)
	Total	13	

Table 4: Courses offered in the Semester IV			
Course Code	Course Title	No of Credits	Compulsory or Elective
DS4101	Advanced Database Management Systems	2	Compulsory
DS4102	Scientific Writing & Documentation	1	Compulsory
DS4103	Software Engineering	2	Compulsory
DS4104	Data Visualization	2	Compulsory
DS4105	Capstone Project in Data Science II	2	Compulsory
DS4106	Applied Data Mining	2	Compulsory
DS4107	Social and Professional Issues in Computing	2	Compulsory
DS4108	Business Intelligence	2	Compulsory
DS4109	Discrete Mathematics	2	Compulsory
DS4110	Artificial Intelligence	2	Compulsory
DS-EAP-2201	Academic English II	-	Compulsory (Non-GPA)
	Total	19	

Table 5: Courses offered in the Semester V			
Course Code	Course Title	No of Credits	Compulsory or Elective
DS5101	Semantic Web	2	Compulsory
DS5102	Time Series Analysis and Forecasting	2	Compulsory
DS5103	Information Security	2	Compulsory
DS5104	Machine Learning	2	Compulsory
DS5105	Linear Programming	2	Compulsory
DS5106	Graph Theory	2	Compulsory
DS-EBP-3101	Business English	-	Compulsory (Non-GPA)
Students should select courses covering 04 Credits from the following elective courses			
DS5107	Image Processing	2	Elective
DS5108	Mobile Computing	2	Elective
DS5109	Data Science for Bioinformatics	2	Elective
DS5110	Human Resource Management	2	Elective
DS5111	Parallel and Distributed Computing	2	Elective
	Total (Compulsory + Electives)	16	
Table 6: Courses offered in the Semester VI			
Course Code	Course Title	No of	Compulsory

		Credits	or Elective
DS6101	Introduction to Deep Learning	1	Compulsory
DS6102	Bayesian Learning and Graphical Models	2	Compulsory
DS6103	Mathematical Optimization	2	Compulsory
DS6104	Industrial Training	6	Compulsory
Students should select courses covering 02 Credits from the following elective courses			
DS6105	Web Services	2	Elective
DS6106	Cloud Computing	2	Elective
DS6107	Business Process Management	2	Elective
DS6108	Software Quality Assurance	2	Elective
DS6109	Fraud and Anomaly Detection	2	Elective
	Total (Compulsory + Electives)	13	

Table 7: Courses offered in the Semester VII			
Course Code	Course Title	No of Credits	Compulsory or Elective
DS7101	Research Method	2	Compulsory
DS7102	Advanced Deep Learning	2	Compulsory
DS7103	Emerging Trends in Data Science	1	Compulsory
DS7104	Numerical Methods	2	Compulsory
DS7105	Natural Language Processing	2	Compulsory
Students should select courses covering 04 Credits from the following elective courses			
DS7106	Entrepreneurship and Innovation	2	Elective
DS7107	Internet of Things	2	Elective
DS7108	Design Patterns and Anti-patterns	2	Elective
DS7109	Ontology Engineering	2	Elective
DS7110	Blockchain and Cryptocurrency	2	Elective
	Total (Compulsory + Electives)	13	

Table 8: Courses offered in the Semester VIII			
Course Code	Course Title	No of Credits	Compulsory or Elective
DS8101	Research Project in Data Science	8	Compulsory
DS8102	Information Retrieval and Web Analytics	2	Compulsory
DS8103	Reinforcement Learning	2	Compulsory
DS8104	Computational Intelligence	2	Compulsory
DS8105	Business Analytics and Applications	1	Compulsory
Students should select courses covering 02 Credits from the following elective courses			
DS8106	Geographical Information Systems	2	Elective
DS8107	Digital Forensics	2	Elective
DS8108	Business Process Simulation	2	Elective
DS8109	Robotics	2	Elective
	Total (Compulsory + Electives)	17	