Data Science and Artificial Intelligence			
Course Code	**Course Title**	**(L-T-P-S-C)**	**Prerequisite**
SEMESTER 1			
DS101	Mathematics for Data Science	3-1-0-0-4	
DS102	Finance and Accounting	3-0-2-0-4	
CS105	Problem Solving through Programming	3-1-2-0-5	
DS104	Data Science and AI Applications	3-0-0-4–4	
HS103	Language and Communication	2-0-2-0-3	
	Semester Credits	**20**	
SEMESTER 2			
DS105	Probability and Statistics	3-1-0-0-4	
CS102	Data Structure	3-1-2-0-5	Problem Solving Through programming-CS105
EG101	Engineering101	2-0-2-4-4	
HS204	Economics	3-1-0-0-4	
HS102	Professional Communication	2-1-2-0-4	
	Semester Credits	**21**	
SEMESTER 3			
DS201	Data and Business Analytics	3-0-2-0-4	
CS201	Discrete Mathematics	3-1-0-0-4	
CS207	Object Oriented Programming	3-0-2-0-4	Problem Solving Through programming-CS105
	Psychology/Sociology/LifeSkills Basket	3-0-0-0-3	
CS202	Design & Analysis of Algorithms	3-1-2-0-5	Data Structure-CS102
HS205	Ethics	3-0-0-0-3	
	Semester Credits	**23**	
SEMESTER 4			
MA202	Linear Algebra	3-1-0-0-4	
EC209	Introduction to Systems Thinking	3-0-2-0-4	
DS203	Operating Systems and Cloud Computing	3-1-0-0-4	Data Structure-CS102
DS204	Software Engineering and Services	3-0-2-0-4	Problem Solving Through programming-CS105
CS310	Database Management Systems	3-1-2-0-5	Data Structure-CS102
DS205	Global Business Perspectives	3-0-0-0-3	
	Semester Credits	**24**	
SEMESTER 5			
DS301	Graphs and Social Networks	3-1-0-0-4	Discrete Mathematics-CS201
DS302	Computer Communication Networks	3-1-2-0-5	Data Structure-CS102
DS303	Algorithms and Artificial Intelligence	3-1-0-0-4	
CS307	Machine Learning	3-1-0-0-4	Linear Algebra-MA202
DS304	Visualization and App Development	2-1-2-0-4	
	Semester Credits	**21**	
SEMESTER 6			
DS305	Legal Aspects of IT	3-1-0-0-4	
DS306	Financial Data Analytics	2-1-2-0-4	Discrete Mathematics-CS201
DS307	Innovation and Entrepreneurship	3-1-0-0-4	
DS308	Data Security and Privacy	3-1-0-0-4	
	Elective 1	4-0-0-0-4	
DS399	Mini Project I	0-0-0-8-2	
	Semester Credits	**22**	
SEMESTER 7			
DS401	Healthcare Data Analytics	3-1-0-0-4	Discrete Mathematics-CS201
	Elective 2	4-0-0-0-4	
	Elective 3	4-0-0-0-4	
	Elective 4	4-0-0-0-4	
DS498	Mini Project II	0-0-0-8-2	
HS101	Environmental Studies*	0-0-0-8-2	
	Semester Credits	**20**	
SEMESTER 8			
DS499	Major Project	0-0-0-32-8	
	Semester Credits	**8**	
	Program Credits	**159**	
1/2 credit online courses need to be given during any specific semester decided by the concerned HoD without violating the semester maximum credit limit of 25.			

Computer Science and Engineering			
Course Code	**Course Title**	**(L-T-P-S-C)**	**Prerequisite**
SEMESTER 1			
MA101	Calculus	3-1-0-0-4	
EG101	Engineering 101	2-0-2-4-4	
CS105	Problem Solving Through Programming	3-1-2-0-5	
HS204	Economics	3-1-0-0-4	
HS103	Language and Communication	2-0-2-0-3	
	Semester Credits	**20**	
SEMESTER 2			
MA103	Mathematics for Computer Science	3-1-0-0-4	
CS102	Data Structure	3-1-2-0-5	Problem Solving Through programming-CS105
CS106	Microprocessors & Microcontrollers	3-0-2-0-4	
PH105	Physics For IT	3-1-0-0-4	
HS102	Professional Communication	2-1-2-0-4	
	Semester Credits	**21**	
SEMESTER 3			
MA201	Probability	3-1-0-0-4	
CS201	Discrete Mathematics	3-1-0-0-4	
CS207	Object Oriented Programming	3-0-2-0-4	Problem Solving Through Programming-CS105
CS208	Computer Architecture	3-0-2-0-4	Microprocessors and Microcontrollers-CS106
CS202	Design & Analysis of Algorithms	3-1-2-0-5	Data Structure-CS102
	Psychology/Sociology/LifeSkills Basket	3-0-0-0-3	
	Semester Credits	**24**	
SEMESTER 4			
MA202	Linear Algebra	3-1-0-0-4	
CS206	Theory of Computing	3-1-0-0-4	Data Structures -CS102, Discrete Mathematics-CS201
CS204	Operating Systems	3-1-0-0-4	Data Structure-CS102
CS301	Software Engineering	3-1-0-0-4	Problem Solving Through programming-CS105
CS310	Database Management Systems	3-1-2-0-5	Data Structure-CS102
HS205	Ethics	3-0-0-0-3	
	Semester Credits	**24**	
SEMESTER 5			
CS309	Statistics for Computer Science	3-1-0-0-4	
CS303	Computer Networks	3-1-2-0-5	Data Structure-CS102
CS304	Artificial Intelligence	3-1-0-0-4	
	CS Theory Basket Elective	4-0-0-0-4	
	Elective 1	4-0-0-0-4	
	Semester Credits	**21**	
SEMESTER 6			
CS307	Machine Learning	3-0-2-0-4	Linear Algebra-MA202
	Elective 2	4-0-0-0-4	
	Elective 3	4-0-0-0-4	
	Elective 4	4-0-0-0-4	
	Elective 5	4-0-0-0-4	
CS399	Mini Project I	0-0-0-8-2	
	Semester Credits	**22**	
SEMESTER 7			
	Elective 6	4-0-0-0-4	
	Elective 7	4-0-0-0-4	
	Elective 8	4-0-0-0-4	
	Elective 9	4-0-0-0-4	
CS498	Mini Project II	0-0-0-8-2	
HS101	Environmental Studies*	0-0-0-8-2	
	Semester Credits	**20**	
SEMESTER 8			
CS499	Major Project	0-0-0-32-8	
	Semester Credits	**8**	
	Program Credits	**160**	
1/2 credit online courses need to be given during any specific semester decided by the concerned HoD without violating the semester maximum credit limit of 25.			

Electronics and Communication Engineering			
Course Code	**Course Title**	**(L-T-P-S-C)**	**Prerequisite**
		SEMESTER 1	
MA101	Calculus	3-1-0-0-4	
EC102	Digital Design	3-0-2-0-4	
CS103	Programming and Data Structures	3-1-2-0-5	
PH104	Physics for ECE	3-1-0-0-4	
EG102	Basic Circuit Theory	3-1-0-0-4	
	Semester Credits	**21**	
		SEMESTER 2	
MA102	Differential Equations	3-1-0-0-4	
EC203	Analog Electronics	3-0-2-0-4	
EC208	Introduction to Embedded Systems	3-0-2-0-4	Digital Design-EC102
EG101	Engineering101	2-0-2-4-4	
HS103	Language and Communication	2-0-2-0-3	
	Semester Credits	**19**	
		SEMESTER 3	
MA202	Linear Algebra	3-1-0-0-4	
EC207	Electromagnetic Theory	3-1-0-0-4	Calculus-MA101
EC206	Linear Integrated Circuits	3-0-2-0-4	
EC201	Signals and Systems	3-1-0-0-4	Differential Equations-MA102
EC202	Microprocessors and Microcontrollers	3-0-2-0-4	Programming and Data Structures-CS103,Introduction to embedded systems- EC208
HS203	Professional Communication	2-1-0-0-3	
	Semester Credits	**23**	
		SEMESTER 4	
MA203	Probability and Random Processes	3-1-0-0-4	
EC205	Control Systems	3-0-2-0-4	Differential Equations-MA102
EC310	Embedded Systems Design	3-1-0-0-4	Microprocessors and Microcontrollers-EC202
EC204	Analog and Digital Communication	3-1-2-0-5	
HS204	Economics	3-1-0-0-4	
HS205	Ethics	3-0-0-0-3	
	Semester Credits	**24**	
		SEMESTER 5	
EC306	Digital Signal Processing	3-0-2-0-4	Signals and Systems-EC201
EC301	Introduction to VLSI Design	3-1-0-0-4	Digital Design-EC102, Analog Electronics-EC203
	Psychology/Sociology/Life Skills Basket	3-0-0-0-3	
	Elective 1	4-0-0-0-4	
	Elective 2	4-0-0-0-4	
	Elective 3	4-0-0-0-4	
	Semester Credits	**23**	
		SEMESTER 6	
EC307	Wireless Communication	3-0-2-0-4	Analog and Digital Communication-EC204
	Elective 4	4-0-0-0-4	
	Elective 5	4-0-0-0-4	
	Elective 6	4-0-0-0-4	
	Elective 7	4-0-0-0-4	
EC399	Mini Project I	0-0-0-8-2	
	Semester Credits	**22**	
		SEMESTER 7	
	Elective 8	4-0-0-0-4	
	Elective 9	4-0-0-0-4	
	Elective 10	4-0-0-0-4	
	Elective 11	4-0-0-0-4	
EC498	Mini Project II	0-0-0-8-2	
HS101	Environmental Studies*	0-0-0-8-2	
	Semester Credits	**20**	
		SEMESTER 8	
EC499	Major Project	0-0-0-32-8	
	Semester Credits	**8**	
	Program Credits	**160**	
1/2 credit online courses need to be given during any specific semester decided by the concerned HoD without violating the semester maximum credit limit of 25.			