

SEMESTER I

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1	HS1101	Communicative English (Common to all Branches of B.E. / B. Tech Programmes)	HSMC	3	3	0	0	3
2	MA1102	Engineering Mathematics – I (Common to all Branches of B.E. / B. Tech Programmes)	BSC	4	4	0	0	4
3	PH1103	Engineering Physics (Common to all Branches of B.E. / B. Tech Programmes)	BSC	3	3	0	0	3
4	CY1104	Engineering Chemistry (Common to all Branches of B.E. / B. Tech Programmes)	BSC	3	3	0	0	3
5	GE1105	Problem Solving and Python Programming (Common to all Branches of B.E. / B. Tech Programmes)	ESC	3	3	0	0	3
6	GE1106	Engineering Graphics (Common to all Branches of B.E. / B. Tech Programmes)	ESC	6	2	0	4	4
PRACTICAL								
7	GE1107	Python Programming Laboratory (Common to all Branches of B.E. / B. Tech Programmes)	ESC	4	0	0	4	2
8	BS1108	Physics and Chemistry Laboratory (Common to all Branches of B.E. / B. Tech Programmes)	BSC	4	0	0	4	2
Total				30	18	0	12	24

SEMESTER II

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1	HS1201	Professional English (Common to all Branches of B.E. / B. Tech Programmes)	HSMC	3	3	0	0	3
2	MA1251	Linear Algebra (Common to AI-DS & AI-ML)	BSC	4	4	0	0	4
3	PH1252	Physics for Information Science (Common to CSE, IT, AI-DS & AI-ML)	BSC	3	3	0	0	3
4	GE1204	Environmental Science and Engineering (Common to all Branches of B.E. / B. Tech Programmes)	HSMC	3	3	0	0	3
5	BE1251	Basic Electrical, Electronics and Measurement Engineering (Common to CSE, IT, AI-DS & AI-ML)	ESC	3	3	0	0	3
6	CS1206	Programming in C (Common to CSE, IT, AI-DS & AI-ML)	PCC	4	3	1	0	3
PRACTICAL								
7	GE1207	Engineering Practice Laboratory (Common to all Branches of B.E. / B. Tech Programmes)	ESC	4	0	0	4	2
8	CS1208	Programming in C Laboratory (Common to CSE, IT, AI-DS & AI-ML)	PCC	4	0	0	4	2
Total				28	19	1	8	23

SEMESTER III

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1	MA1351	Probability and Statistics (Common to CSE, IT & AI-DS)	BSC	4	4	0	0	4
2	DS1301	Computer Organization and Architecture	ESC	3	3	0	0	3
3	CS1302	Data Structures (Common to CSE, IT, AI-DS, AI-ML & ECE Semester IV)	PCC	4	3	1	0	3
4	DS1302	Object Oriented Programming (Lab Integrated) (Common to AI-DS, EEE & EIE)	PCC	5	3	0	2	4
5	DS1303	Introduction to Artificial Intelligence (Common to AI-DS & AI-ML)	PCC	3	3	0	0	3
6	DS1304	Foundations of Data Science	PCC	3	3	0	0	3
PRACTICAL								
7	DS1307	Data Structures Laboratory using Python (Common to AI-DS & AI-ML)	PCC	4	0	0	4	2
8	DS1308	Artificial Intelligence Laboratory (Common to AI-DS & AI-ML)	PCC	4	0	0	4	2
Total				30	19	1	10	24

SEMESTER IV

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1	MA1453	Discrete Mathematics (Common to CSE, IT & AI-DS)	BSC	4	4	0	0	4
2	CS1401	Design and Analysis of Algorithms (Common to CSE, IT, AI-DS & AI-ML)	PCC	3	3	0	0	3
3	CS1402	Operating Systems (Common to CSE, IT, AI-DS & AI-ML)	PCC	3	3	0	0	3
4	CS1403	Database Design and Management (Lab Integrated) (Common to CSE, IT, AI-DS & AI-ML)	PCC	5	3	0	2	4
5	DS1401	Python Programming for Data Science	PCC	3	3	0	0	3
6	ML1401	Foundations of Machine Learning (Common to IT, AI-DS & AI-ML)	PCC	3	3	0	0	3
PRACTICAL								
7	DS1407	Data Science Laboratory using Python	PCC	4	0	0	4	2
8	ML1408	Machine Learning Laboratory (Common to IT, AI-DS & AI-ML)	PCC	4	0	0	4	2
9	HS1310	Professional Skills Laboratory	HSMC	2	0	0	2	1
Total				31	19	0	12	25

SEMESTER V

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1	DS1501	Optimization in Data Analysis	PCC	4	4	0	0	4
2	DS1502	Advanced Artificial Intelligence (Common to AI-DS & AI-ML)	PCC	4	3	1	0	3
3	DS1503	Data Mining	PCC	4	3	1	0	3
4	DS1504	Exploratory Data Analysis	PCC	4	3	1	0	3
5		Open Electives - I	OEC	3	3	0	0	3
6		Professional Elective - I	PEC	3	3	0	0	3
PRACTICAL								
7	DS1507	Data Preparation and Analysis Laboratory	PCC	4	0	0	4	2
8	DS1508	Advanced Artificial Intelligence Laboratory (Common to IT, AI-DS & AI-ML)	PCC	4	0	0	4	2
Total				30	19	3	8	23
9		Value Added Courses	Audit Course	Two Weeks				1

SEMESTER VI

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1	DS1601	Modern Scripting Languages	PCC	4	3	1	0	3
2	DS1602	Computational Linguistics	PCC	4	3	1	0	3
3	DS1603	Data Visualization	PCC	3	3	0	0	3
4	DS1604	Data Analytics	PCC	5	3	0	2	4
5		Open Elective - II	OEC	3	3	0	0	3
6		Professional Electives - II	PEC	3	3	0	0	3
PRACTICAL								
7	DS1607	Data Visualization Laboratory	PCC	4	0	0	4	2
8	DS1608	Mini Project - I	EEC	4	0	0	4	2
Total				30	18	2	10	23
9		Audit Course (Optional)	AC					

SEMESTER VII

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1	DS1701	Neuro-Fuzzy Computing	PCC	4	3	1	0	3
2	DS1702	Text Analytics	PCC	4	3	1	0	3
3	DS1703	Computer Vision	PCC	4	3	1	0	3
4	DS1704	Big Data Management	PCC	4	3	1	0	3
5		Professional Elective - III	PEC	3	3	0	0	3
6		Professional Elective - IV	PEC	3	3	0	0	3
PRACTICAL								
7	DS1707	Neuro-Fuzzy Computing Laboratory	PCC	4	0	0	4	2
8	DS1708	Mini Project - II	EEC	4	0	0	4	2
Total				30	18	4	8	22

SEMESTER VIII

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1		Professional Elective - V	PEC	3	3	0	0	3
2		Professional Elective - VI	PEC	3	3	0	0	3
PRACTICAL								
3	DS1807	Project Work	EEC	20	0	0	20	10
Total				26	6	0	20	16

TOTAL NO. OF CREDITS: 180

HUMANITICS SCIENCE AND MANAGEMENT COURSES (HSMC)

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	HS1101	Communicative English	3	3	0	0	3
2	HS1201	Professional English	3	3	0	0	3
3	GE1204	Environmental Science and Engineering	3	3	0	0	3
4	HS1310	Professional Skills Laboratory	2	0	0	2	1

BASIC SCIENCE COURSES (BSC)

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	MA1102	Engineering Mathematics - I	4	4	0	0	4
2	PH1103	Engineering Physics	3	3	0	0	3
3	CY1104	Engineering Chemistry	3	3	0	0	3
4	BS1108	Physics and Chemistry Laboratory	4	0	0	4	2
5	MA1251	Linear Algebra	4	4	0	0	4
6	PH1252	Physics for Information Science	3	3	0	0	3
7	MA1351	Probability and Statistics	4	4	0	0	4
8	MA1453	Discrete Mathematics	4	4	0	0	4

ENGINEERING SCIENCE COURSES (ESC)

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	GE1105	Problem Solving and Python Programming	3	3	0	0	3
2	GE1106	Engineering Graphics	6	2	0	4	4
3	GE1107	Python Programming Laboratory	4	0	0	4	2
4	BE1251	Basic Electrical, Electronics and Measurement Engineering	3	3	0	0	3
5	GE1207	Engineering Practice Laboratory	4	0	0	4	2
6	DS1301	Computer Organization and Architecture	3	3	0	0	3

PROFESSIONAL CORE COURSES (PCC)

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	CS1206	Programming in C	4	3	1	0	3
2	CS1208	Programming in C Laboratory	4	0	0	4	2
3	CS1302	Data Structures	4	3	1	0	3
4	DS1302	Object Oriented Programming (Lab Integrated)	5	3	0	2	4
5	DS1303	Introduction to Artificial Intelligence	3	3	0	0	3
6	DS1304	Foundations of Data Science	3	3	0	0	3
7	DS1307	Data Structure Laboratory using Python	4	0	0	4	2
8	DS1308	Artificial Intelligence Laboratory	4	0	0	4	2
9	CS1401	Design and Analysis of Algorithms	3	3	0	0	3
10	CS1402	Operating Systems	3	3	0	0	3
11	CS1403	Database Design and Management (Lab Integrated)	5	3	0	2	4
12	ML1401	Foundations of Machine Learning	3	3	0	0	3
13	DS1401	Python Programming for Data Science	3	3	0	0	3
14	DS1407	Data Science Laboratory using Python	4	0	0	4	2
15	ML1408	Machine Learning Laboratory	4	0	0	4	2
16	DS1501	Optimization in Data Analysis	4	4	0	0	4
17	DS1502	Advanced Artificial Intelligence	4	3	1	0	3
18	DS1503	Data Mining	4	3	1	0	3
19	DS1504	Exploratory Data Analysis	4	3	1	0	3
20	DS1507	Data Preparation and Analysis Laboratory	4	0	0	4	2
21	DS1508	Advanced Artificial Intelligence Laboratory	4	0	0	4	2
22	DS1601	Modern Scripting Languages	4	3	1	0	3
23	DS1602	Computational Linguistics	4	3	1	0	3
24	DS1603	Data Visualization	3	3	0	0	3
25	DS1604	Data Analytics	5	3	0	2	4
26	DS1607	Data Visualization Laboratory	4	0	0	4	2
27	DS1701	Neuro-Fuzzy Computing	4	3	1	0	3
28	DS1702	Text Analytics	4	3	1	0	3
29	DS1703	Computer Vision	4	3	1	0	3
30	DS1704	Big Data Management	4	3	1	0	3
31	DS1707	Neuro-Fuzzy Computing Laboratory	4	0	0	4	2

PROFESSIONAL ELECTIVE COURSES (PEC)**SEMESTER V****PROFESSIONAL ELECTIVE - I**

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	DS1511	XML and Web Services	3	3	0	0	3
2	DS1512	R Programming for Data Science	3	3	0	0	3
3	DS1513	Prolog Programming for Artificial Intelligence	3	3	0	0	3
4	DS1514	Data Science Tools	3	3	0	0	3
5	IT1514	Knowledge Engineering	3	3	0	0	3

SEMESTER VI**PROFESSIONAL ELECTIVE - II**

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	DS1611	Image and Video Analytics	3	3	0	0	3
2	DS1612	Healthcare Analytics	3	3	0	0	3
3	DS1613	Cloud Computing for Data Analysis	3	3	0	0	3
4	DS1614	Computational Thinking	3	3	0	0	3
5	DS1615	Ethics in Data Science	3	3	0	0	3

SEMESTER VII**PROFESSIONAL ELECTIVE - III**

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	DS1711	Data and Information Security	3	3	0	0	3
2	DS1712	Evolutionary Computation	3	3	0	0	3
3	DS1713	Pattern Recognition	3	3	0	0	3
4	DS1714	Web Analytics	3	3	0	0	3
5	MG1001	Principles of Management	3	3	0	0	3

SEMESTER VII
PROFESSIONAL ELECTIVE - IV

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	DS1721	Stochastic Process	3	3	0	0	3
2	DS1722	Software Testing using Automated Tools	3	3	0	0	3
3	DS1723	Social Network Analytics	3	3	0	0	3
4	DS1724	Multivariate Analysis	3	3	0	0	3
5	MG1725	Entrepreneurship	3	3	0	0	3

SEMESTER VIII
PROFESSIONAL ELECTIVE - V

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	DS1811	Data Mining and Information Security	3	3	0	0	3
2	DS1812	Speech Processing and Synthesis	3	3	0	0	3
3	DS1813	Cyber Security	3	3	0	0	3
4	DS1814	Predictive Analytics	3	3	0	0	3
5	DS1815	Statistical Computing	3	3	0	0	3

SEMESTER VIII
PROFESSIONAL ELECTIVE - VI

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	DS1821	Cognitive Systems	3	3	0	0	3
2	DS1822	Parallel Computing	3	3	0	0	3
3	DS1823	Bio-inspired Optimization Techniques	3	3	0	0	3
4	DS1824	Information Storage Management	3	3	0	0	3
5	MG1825	Engineering Economics	3	3	0	0	3

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	DS1608	Mini Project – I	4	0	0	4	2
2	DS1708	Mini Project - II	4	0	0	4	2
3	DS1807	Project Work	20	0	0	20	10

OPEN ELECTIVE COURSES – I & II

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	OBT101	Industrial Biotechnology	3	3	0	0	3
2	OBT104	Bio Sensors	3	3	0	0	3
3	OBT105	Introduction to Nano Science and Nano Technology	3	3	0	0	3
4	OCE102	Introduction to Geographic Information system	3	3	0	0	3
5	OCH101	Hospital Management	3	3	0	0	3
6	OEC103	Basics of Embedded Systems and IoT	3	3	0	0	3
7	OEE101	Basic Circuit Theory	3	3	0	0	3
8	OEE103	Introduction to Renewable Energy Systems	3	3	0	0	3
9	OEI102	Robotics	3	3	0	0	3
10	OMB101	Total Quality Management	3	3	0	0	3
11	OME104	Industrial Safety Engineering	3	3	0	0	3

AUDIT COURSE (AC)

S.No.	COURSE CODE	COURSE TITLE	CONTACT PERIODS	L	T	P	C
1	AD1001	Constitution of India	2	2	0	0	0
2	AD1002	Value Education	2	2	0	0	0
3	AD1003	Pedagogy Studies	2	2	0	0	0
4	AD1004	Stress Management by Yoga	2	2	0	0	0
5	AD1005	Personality Development Through Life Enlightenment Skills	2	2	0	0	0
6	AD1006	Unnat Bharat Abhiyan	2	2	0	0	0
7	AD1007	Essence of Indian Knowledge Tradition	2	2	0	0	0
8	AD1008	Sanga Tamil Literature Appreciation	2	2	0	0	0

* Registration for any of these courses is optional to students