

BTech Civil (Construction Engineering and Management)
With Specialisation in Artificial Intelligence and Machine Learning

Course Structure: 2020-24

I SEMESTER – CHEMISTRY CYCLE											
#	Course Type	Course Code	Course Name	Hours			Total Marks	Credits			Total Credits
				L	T	P		L	T	P	
1	BSC	MA131	Mathematics – I	3	0	0	100	3	0	0	3
2	BSC	CH132P	Chemistry	3	0	2	100	3	0	1	4
3	ESC	EC133P	Basic Electronics	3	0	2	100	3	0	1	4
4	ESC	CS134P	Computer Programming	3	0	2	100	3	0	1	4
5	ESC	ME135	Basic Mechanical Engineering and Nano-science	3	0	0	100	3	0	0	3
6	HSMC	TE136P	Technical English	1	0	2	100	1	0	1	2
7	ESC	ME 151	Workshop Practice Lab	0	0	2	50	0	0	1	1
8	HSMC	HE171	Holistic Education-I	1	0	0	---	1	0	0	1
			Total				650				22

I SEMESTER – PHYSICS CYCLE											
#	Course Type	Course Code	Course Name	Hours			Total Marks	Credits			Total Credits
				L	T	P		L	T	P	
1	BSC	MA131	Mathematics – I	3	0	0	100	3	0	0	3
2	BSC	PH132P	Physics	3	0	2	100	3	0	1	4
3	ESC	EE133P	Basic Electrical Engineering	3	0	2	100	3	0	1	4
4	ESC	CE134P	Basics of Civil Engineering & Engineering Mechanics	3	0	2	100	3	0	1	4
5	ESC	EG135P	Engineering Graphics	2	0	2	100	2	0	1	3
6	BSC	BS136	Basic Biology	2	0	0	50	2	0	0	2
7	HSMC	HE171	Holistic Education-I	1	0	0	---	1	0	0	1
			Total				550				21

II SEMESTER – CHEMISTRY CYCLE											
#	Course Type	Course Code	Course Name	Hours			Total Marks	Credits			Total Credits
				L	T	P		L	T	P	
1	BSC	MA231	Mathematics – II	3	0	0	100	3	0	0	3
2	BSC	CH232P	Chemistry	3	0	2	100	3	0	1	4
3	ESC	EC233P	Basic Electronics	3	0	2	100	3	0	1	4
4	ESC	CS234P	Computer Programming	3	0	2	100	3	0	1	4
5	ESC	ME235	Basic Mechanical Engineering and Nano-science	3	0	0	100	3	0	0	3
6	HSMC	TE236P	Technical English	1	0	2	100	1	0	1	2
7	ESC	ME 251	Workshop Practice Lab	0	0	2	50	0	0	1	1
8	HSMC	HE271	Holistic Education-II	1	0	0	---	1	0	0	1
			Total				650				22

II SEMESTER – PHYSICS CYCLE											
#	Course Type	Course Code	Course Name	Hours			Total Marks	Credits			Total Credits
				L	T	P		L	T	P	
1	BSC	MA231	Mathematics – II	3	0	0	100	3	0	0	3
2	BSC	PH232P	Physics	3	0	2	100	3	0	1	4
3	ESC	EE233P	Basic Electrical Engineering	3	0	2	100	3	0	1	4
4	ESC	CE234P	Basics of Civil Engineering & Engineering Mechanics	3	0	2	100	3	0	1	4
5	ESC	EG235P	Engineering Graphics	2	0	2	100	2	0	1	3
6	BSC	BS236	Basic Biology	2	0	0	50	2	0	0	2
7	HSMC	HE271	Holistic Education-II	1	0	0	---	1	0	0	1
			Total				550				21

III Semester

#	Course Type	Course Code	Course Name	Hours			Total Marks	Credits			Total Credits
				L	T	P		L	T	P	
1	BSC	MA331	Mathematics-III	3	0	0	100	3	0	0	3
2	PCC	CE331P	Computer-aided Civil Engineering Drawing	1	0	2	50	1	0	1	2
3	PCC	CE332	Disaster Preparedness and Planning	2	0	0	50	2	0	0	2
4	PCC	CE333P	Introduction to Solid Mechanics	3	0	2	100	3	0	1	4
5	PCC	CE334P	Surveying and Geomatics	3	0	2	100	3	0	1	4
6	PCC	CE335	Introduction to Fluid mechanics	3	1	0	100	3	0	0	4
7	BSC	BS336P	Engineering Biology Laboratory	0	0	2	50	0	0	1	1
8	MC Non-Credit	MC301	Environmental Science	2	0	0	0	0	0	0	0
9	HSMC	HE371	Holistic Education-III	1	0	0	0	1	0	0	1
			Total				550				21

IV Semester							
#	Course Type	Course Code	Course Name	Hours	Total Marks	Credits	Total Credits

				L	T	P		L	T	P	
1	PCC	CE431P	Hydraulic Engineering	3	0	2	100	3	0	1	4
2	PCC	CE432	Mechanics of Materials	3	1	0	100	3	1	0	4
3	PCC	CE(CEM)431	Construction Materials	3	0	2	100	3	0	1	4
4	PCC	CE(CEM)432	Construction Equipment	3	0	0	100	3	0	0	3
5	PEC	AIML(CEM)431	Neural Networks and Programming Language	3	0	1	100	3	0	1	4
6	HSMC	HS402	Professional Ethics	2	0	0	50	2	0	0	2
7	MC Non-Credit	MC402	Cyber Security	2	0	0	0	0	0	0	0
8	HSMC	HE471	Holistic Education-IV	1	0	0	0	1	0	0	1
			Total				550				22

V Semester											
#	Course Type	Course Code	Course Name	Hours			Total Marks	Credits			Total Credits
				L	T	P		L	T	P	
1	PCC	CE531	Structural Engineering	3	1	0	100	3	0	0	4
2	PCC	CE532P	Geotechnical Engineering	3	0	2	100	3	0	1	4
3	PCC	CE(CEM)531	Construction Quality and Safety Management	3	0	0	100	3	0	0	3
5	PEC	CE534EC01	Program Elective – 1	3	0	0	100	3	0	0	3
6	PEC	AIML(CEM)531	Applications of for AL/M for Civil Engineering	3	0	1	100	3	0	1	4
7	HSMC	HS503	Project Management & Finance	2	0	2	100	2	0	1	3
8	MC Non-Credit		Indian Constitution	0	0	0	-	0	0	0	0
			Total				600				21

VI Semester											
#	Course Type	Course Code	Course Name	Hours			Total Marks	Credits			Total Credits
				L	T	P		L	T	p	
1	PCC	CE631P	Environmental Engineering	3	0	2	100	3	0	1	4
2	PCC	CE632P	Highway Engineering	3	0	2	100	3	0	1	4
3	PEC	CE633EC02	Program Elective – 2	3	0	0	100	3	0	0	3
4	PEC	CE634EC03	Program Elective – 3	3	0	0	100	3	0	0	3
5	OE	CE635OE01	Open Elective - 1	3	0	0	100	3	0	0	3
6	PEC	AIML(CEM) 631	Principles and Practice of ML in Civil Engineering	3	0	1	100	3	0	1	4
6	PCC	CE651	Extensive Survey Project	1	0	2	50	1	0	1	2
			Total				650				23

VII Semester											
#	Course Type	Course Code	Course Name	Hours			Total Marks	Credits			Total Credits
				L	T	P		L	T	P	
1	PCC	CE731P	Engineering Economics, Estimation & Costing	3	0	2	100	3	0	1	4
2	PEC	CE732EC04	Program Elective – 4	3	0	0	100	3	0	0	3
3	PEC	CE733EC05	Program Elective – 5	3	0	0	100	3	0	0	3
4	OE	CE734OE02	Open Elective – 2	3	0	0	100	3	0	0	3
5	PEC	AIML(CEM) 731	AI and ML using R	3	0	1	100	3	0	1	4
6	PROJ	CE771	Internship	0	0	2	50	0	0	2	2
7	PROJ	CE772	Field Practice	1	0	2	50	0	0	1	2
8	PROJ	CE773	Project Work – I	0	0	8	100	0	0	4	4
9	HSMC	HS704	Service Learning	1	0	2	50	1	0	1	2
			Total				750				27

VIII Semester											
#	Course Type	Course Code	Course Name	Hours			Total Marks	Credits			Total Credits
				L	T	P		L	T	P	

1	PEC	AIML(CEM)831	Fundamentals Deep Learning	3	0	1	100	3	0	1	4
1	PEC	CE831	Program Elective – 6	3	0	0	100	3	0	0	3
3	PROJ	CE872	Seminar	0	0	2	50	0	0	1	1
4	PROJ	CE873	Project Stage-II	0	0	16	300	0	0	8	8
			Total				550				16