

BRANCH CODE: CE23
Dual Degree (B.Tech. & M.Tech.) in Civil Engineering
2014-Batch

SEMESTER 1

S.No	Course No	Course Name	L	T	P	C	Category
1	CE1010	Introduction to Civil Eng. Profession	2	0	0	2	PMT
2	CY1002	Chemistry Lab I	1	0	3	3	SCY
3	ID1100	Concepts in Engineering Design	2	0	0	2	BET
4	MA1010	Calculus I Functions of One Variable	3	1	0	4	SMA
5	ME1100	Thermodynamics	3	0	0	3	BET
6	ME1120	Engineering Drawing	3	0	0	3	BES
7	PH1010	Physics I	3	0	0	3	SPH
8	PH1030	Physics Laboratory I	0	0	3	2	SPH
9	GN1100	Life Skills	2	0	0	2	HPF
		Total Credits :				24	

SEMESTER 2

S.No	Course No	Course Name	L	T	P	C	Category
1	AM1100	Engineering Mechanics	4	0	0	4	BET
2	CE1020	Functional Design of Buildings	2	0	0	2	PMT
3	CS1100	Computational Engineering	3	0	0	3	BET
4	CY1001	Chemistry: Structure, Bonding & Reactivity	4	0	0	4	SCY
5	MA1020	Calculus II Functions of Several Variables	3	1	0	4	SMA
6	PH1020	Physics II	3	0	0	3	SPH
7	PH1040	Physics Laboratory II	0	0	3	2	SPH
		Total Credits :				22	
	WS1010	Workshop I	0	0	6	4	BES
	WS1020	Workshop II	0	0	3	2	BES

SEMESTER 3

S.No	Course No	Course Name	L	T	P	C	Category
1	BT1010	Life Sciences	2	0	0	2	SLS
2	CE2050	Building Drawing	0	0	3	2	PML
3	CE2310	Mechanics of Materials	4	0	0	4	PMT
4	CE2330	Civil Engg Materials & Construction	4	0	0	4	PMT
5	EE1100	Basic Electrical Engineering	3	0	0	3	BET
6	ID1200	Ecology and Environment	2	0	0	2	BET
7	HSE1	Humanities Elective 1	3	0	0	3	HSS
8	MAE1	Mathematics Elective 1	3	0	0	3	SMA
		Total Credits :				23	

SEMESTER 4

S.No	Course No	Course Name	L	T	P	C	Category
1	CE2020	Structural Analysis	4	0	0	4	PMT
2	CE2040	Hydraulic Engineering	4	0	0	4	PMT
3	CE2060	Geology and Soil Mechanics	4	0	0	4	PMT
4	CE2080	Surveying	4	0	0	4	PMT
5	CE2100	Surveying Practical	0	0	3	2	PML
6	HSE2	Humanities Elective 2	3	0	0	3	HSS
7	MAE2	Mathematics Elective 2	3	0	0	3	SMA
		Total Credits :				24	

SEMESTER 5

S.No	Course No	Course Name	L	T	P	C	Category
1	CE3010	Transportation Engineering I	3	0	0	3	PMT
2	CE3030	Water Resources Engineering	4	0	0	4	PMT
3	CE3050	Basic Structural Steel Design	4	0	0	4	PMT
4	CE3350	Geotechnical Engineering	4	0	0	4	PMT
5	CE3410	Construction Materials Lab	0	0	3	2	PML
6	DPE1	Department Elective 1	3	0	0	3	PMT
7	MNS1	Minor Elective 1	3	0	0	3	MNS
		Total Credits :				23	

SEMESTER 6

S.No	Course No	Course Name	L	T	P	C	Category
1	CE3020	Transportation Engg. II	3	0	0	3	PMT
2	CE3040	Environmental Engineering	4	0	0	4	PMT
3	CE3060	Basic Reinforced Concrete Design	4	0	0	4	PMT
4	CE4030	Hydraulic & Environmental Engg Lab	0	0	2	2	PML
5	CE4080	Infrastructure Project Summer Training	0	0	0	2	PIT
5	DPE2	Department Elective 2	3	0	0	3	PMT
6	FRE1	Free Elective 1	3	0	0	3	
7	MNS2	Minor Elective 2	3	0	0	3	MNS
		Total Credits :				24	

Semester	I	II	III	IV	V	VI	Total
Req. Cr.	24	22+6	23	24	23	24	144

Branch code: CE21**2014-Batch****Dual Degree (B.Tech. & M.Tech.) in Civil Engineering****Stream: Infrastructural Civil Engineering***(Curriculum for the first six semester is common – refer Page No.19 & 20)***SEMESTER 7**

S.No	Course No	Course Name	L	T	P	C	Category
1	CE3100	Structural Engg Lab	0	0	3	2	PML
2	CE4010	Estimation & Construction Management	4	0	0	4	PMT
3	CE5870	Infrastructure Planning and Management	3	0	0	3	PMT
4	DPE3	Department Elective 3	3	0	0	3	PMT
5	FRE2	Free Elective 2	3	0	0	3	
6	HSE4	Humanities Elective 4	3	0	0	3	HSS
7	MNS3	Minor Elective 3	3	0	0	3	MNS
	SSE1	Self- Study Elective 1	3	0	0	3	PSS
		Total Credits :				24	

SEMESTER 8

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4020	Industrial Lecture	0	0	0	1	PIL
2	CE6180	Environmental Impact Assessment	3	0	0	3	PMT
3	HS3050	Professional Ethics	2	0	0	2	HPF
4	MS6620	Infrastructure Finance	2	0	0	2	PMT
5	DPE4	Department Elective 4	3	0	0	3	PMT
6	DPE5	Department Elective 5	3	0	0	3	PMT
7	DPE6	Department Elective 6	3	0	0	3	PMT
		Total Credits :				17	

SEMESTER 9

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4940	Project I	0	0	0	4*	PMP
2	CE4950	VIVA VOCE	0	0	0	2	PMP
3	CE6010	Construction Contracts & Specifications	3	0	0	3	PMT
4	DPE7	Department Elective 7	3	0	0	3	PMT
5	DPE8	Department Elective 8	3	0	0	3	PMT
		Total Credits :				11	

** Project (CE4940) grade will be assigned at the end of 10th semester***SEMESTER 10**

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4960	Project II	0	0	0	16	PMP
		Total Credits :				16	

Semester	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
Req. Cr.	24	22+6	23	24	23	24	24	17	11	16	214

Category	BES	BET	HPF	HSS	MNS	PIL	PIT	PML	PMP
Req. Cr.	9	17	4	9	9	1	2	10	18

Category	PMT	PPF	PSS	SCY	SMA	SPH	SLS	FRE	EXT
Req. Cr.	87	6	3	7	14	10	2	6	0

Remarks

- Total number of professional major elective courses should be at least eight (other than self-study)
- Electives from Civil Elective List or other equivalents from other departments with the consent of the Faculty Adviser & HoD.
- At the UG level maximum of two elective courses
- Any two of the elective courses can be taken as Pass/Fail courses
- The project training at the end of 8th semester should be in infrastructure project industry / site.
- Free Electives I & II category will be indicated in the grade card according to the course chosen by the student from own department or from other departments such as MA, HS & PH.
- Dual Degree (B.Tech. Honours & M.Tech.)
(Total credit requirement: 214+12 = 226)
 - **Students** having a CGPA of ≥ 8.5 and who have cleared all the courses in the first attempt can opt for B.Tech (Honours) at the end of the fourth semester.
 - Those who opt for B.Tech (Honours) must register for 12 additional PMT credits.
 - Students can register for a maximum of 2 additional PMT courses in a semester from the Honours basket of courses over and above the courses prescribed in the B.Tech curriculum from 5th semester onwards.
 - Project work is a must for B.Tech (Honours) students in B.Tech programme.
 - Those who have registered for B.Tech (Honours) must maintain an average CGPA of 8.5 from 4th semester onwards. Otherwise, they will be awarded only B.Tech Degree.
 - Extra credits earned by the students will be counted for prizes and awards.

Branch Code: CE24**2014-Batch**

Dual Degree (B.Tech. & M.Tech.) in Civil Engineering
Stream: Building Technology & Construction Management
(Curriculum for the first six semester is common – refer Page No.19 & 20)

SEMESTER 7

S.No	Course No	Course Name	L	T	P	C	Category
1	CE3100	Structural Engg Lab	0	0	3	2	PML
2	CE4010	Estimation & Construction Management	3	1	0	4	PMT
3	DDE1	Dual Degree Elective 1	3	0	0	3	PMT
4	DDE2	Dual Degree Elective 2	3	0	0	3	PMT
5	FRE2	Free Elective 2	3	0	0	3	
6	HSE4	Humanities Elective 4	3	0	0	3	HSS
7	MNS3	Minor Elective 3	3	0	0	3	MNS
8	SSE1	Self- Study Elective 1	3	0	0	3	PSS
		Total Credits :				24	

SEMESTER 8

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4020	Industrial Lecture	0	0	0	1	PIL
3	HS3050	Professional Ethics	2	0	0	2	HPF
2	DDE3	Dual Degree Elective 3	3	0	0	3	PMT
4	DDE4	Dual Degree Elective 4	3	0	0	3	PMT
5	DDE5	Dual Degree Elective 5	3	0	0	3	PMT
6	DDE6	Dual Degree Elective 6	3	0	0	3	PMT
7	DDE7	Dual Degree Elective 7	3	0	0	3	PMT
		Total Credits :				18	

SEMESTER 9

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4941	Project I	0	0	0	3*	PMP
2	CE4950	VIVA VOCE	0	0	0	2	PMP
3	DDE8	Dual Degree Elective 8	3	0	0	3	PMT
4	DDE9	Dual Degree Elective 9	3	0	0	3	PMT
5	DDE10	Dual Degree Elective 10	3	0	0	3	PMT
		Total Credits :				11	

* Project (CE4941) grade will be assigned at the end of 10th semester

SEMESTER 10

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4961	Project II	0	0	0	15	PMP
		Total Credits :				15	

Semester	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
Req. Cr.	24	22+6	23	24	23	24	24	18	11	15	214

Category	BES	BET	HPF	HSS	MNS	PIL	PIT	PML	PMP
Req. Cr.	9	17	4	9	9	1	2	10	17

Category	PMT	PPF	PSS	SCY	SMA	SPH	SLS	FRE	EXT
Req. Cr.	88	6	3	7	14	10	2	6	0

Remarks

- Total number of professional major elective courses should be at least eight (other than self-study)
- Electives from Civil Elective List or other equivalents from other departments with the consent of the Faculty Adviser & HoD.
- At the UG level maximum of two elective courses
- Any two of the elective courses can be taken as Pass/Fail courses
- The project training at the end of 8th semester should be in infrastructure project industry / site.
- Free Electives I & II category will be indicated in the grade card according to the course chosen by the student from own department or from other departments such as MA, HS & PH.
- Dual Degree (B.Tech. Honours & M.Tech.)
(Total credit requirement: 214+12 = 226)
 - **Students** having a CGPA of ≥ 8.5 and who have cleared all the courses in the first attempt can opt for B.Tech (Honours) at the end of the fourth semester.
 - Those who opt for B.Tech (Honours) must register for 12 additional PMT credits.
 - Students can register for a maximum of 2 additional PMT courses in a semester from the Honours basket of courses over and above the courses prescribed in the B.Tech curriculum from 5th semester onwards.
 - Project work is a must for B.Tech (Honours) students in B.Tech programme.
 - Those who have registered for B.Tech (Honours) must maintain an average CGPA of 8.5 from 4th semester onwards. Otherwise, they will be awarded only B.Tech Degree.
 - Extra credits earned by the students will be counted for prizes and awards.

Branch Code: CE25**2014-Batch****Dual Degree (B.Tech. & M.Tech.) in Civil Engineering****Stream: Environmental Engineering***(Curriculum for the first six semester is common – refer Page No.19 & 20)***SEMESTER 7**

S.No	Course No	Course Name	L	T	P	C	Category
1	CE3100	Structural Engg Lab	0	0	3	2	PML
2	CE4010	Estimation & Construction Management	4	0	0	4	PMT
3	CE5150	Environmental Chemistry & Microbiology	4	0	0	4	PMT
4	DDE1	Dual Degree Elective 1	3	0	0	3	PMT
5	FRE2	Free Elective 2	3	0	0	3	
6	HSE4	Humanities Elective 4	3	0	0	3	HSS
7	MNS3	Minor Elective 3	3	0	0	3	MNS
	SSE1	Self- Study Elective 1	3	0	0	3	PSS
		Total Credits :				25	

SEMESTER 8

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4020	Industrial Lecture	0	0	0	1	PIL
2	CE5160	Biological Process Design for Wastewater Treatment	4	0	0	4	PMT
3	CE5180	Air Pollution and Control Engineering	4	0	0	4	PMT
4	HS3050	Professional Ethics	2	0	0	2	HPF
5	DDE2	Dual Degree Elective 2	3	0	0	3	PMT
6	DDE3	Dual Degree Elective 3	3	0	0	3	PMT
		Total Credits :				17	

SEMESTER 9

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4942	Project I	0	0	0	3*	PMP
2	CE4950	VIVA VOCE	0	0	0	2	PMP
3	CE5170	Physico-Chemical process for water and wastewater treatment	4	0	0	4	PMT
4	DDE4	Dual Degree Elective 4	3	0	0	3	PMT
5	DDE5	Dual Degree Elective 5	3	0	0	3	PMT
		Total Credits :				12	

** Project (CE4941) grade will be assigned at the end of 10th semester***SEMESTER 10**

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4962	Project II	0	0	0	14	PMP
		Total Credits :				14	

Semester	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
Req. Cr.	23	22+6	23	24	23	24	25	17	12	14	214

Category	BES	BET	HPF	HSS	MNS	PIL	PIT	PML	PMP
Req. Cr.	9	17	4	9	9	1	2	10	16

Category	PMT	PPF	PSS	SCY	SMA	SPH	SLS	FRE	EXT
Req. Cr.	89	6	3	7	14	10	2	6	0

Remarks

- Total number of professional major elective courses should be at least eight (other than self-study)
- Electives from Civil Elective List or other equivalents from other departments with the consent of the Faculty Adviser & HoD.
- At the UG level maximum of two elective courses
- Any two of the elective courses can be taken as Pass/Fail courses
- The project training at the end of 8th semester should be in infrastructure project industry / site.
- Free Electives I & II category will be indicated in the grade card according to the course chosen by the student from own department or from other departments such as MA, HS & PH.
- Dual Degree (B.Tech. Honours & M.Tech.)
(Total credit requirement: 214+12 = 226)
 - **Students** having a CGPA of ≥ 8.5 and who have cleared all the courses in the first attempt can opt for B.Tech (Honours) at the end of the fourth semester.
 - Those who opt for B.Tech (Honours) must register for 12 additional PMT credits.
 - Students can register for a maximum of 2 additional PMT courses in a semester from the Honours basket of courses over and above the courses prescribed in the B.Tech curriculum from 5th semester onwards.
 - Project work is a must for B.Tech (Honours) students in B.Tech programme.
 - Those who have registered for B.Tech (Honours) must maintain an average CGPA of 8.5 from 4th semester onwards. Otherwise, they will be awarded only B.Tech Degree.
 - Extra credits earned by the students will be counted for prizes and awards.

Branch Code: CE26
2014-Batch
Dual Degree (B.Tech. & M.Tech.) in Civil Engineering
Stream: Geotechnical Engineering
(Curriculum for the first six semester is common – refer Page No.19 & 20)

SEMESTER 7

S.No	Course No	Course Name	L	T	P	C	Category
1	CE3100	Structural Engg. Lab	0	0	3	2	PML
2	CE4010	Estimation & Construction Management	3	1	0	4	PMT
3	CE5310	Advanced Soil Mechanics	3	1	0	4	PMT
4	DDE1	Dual Degree Elective 1	3	0	0	3	PMT
5	FRE2	Free Elective 2	3	0	0	3	*
6	HSE3	Humanities Elective 3	3	0	0	3	HSS
7	MNS3	Minor Elective 3	3	0	0	3	MNS
8	SSE1	Self-Study Elective 1	3	0	0	3	PSS
		Total Credits :				25	

SEMESTER 8

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4020	Industrial Lecture	0	0	0	1	PIL
2	CE5300	Applied Soil Mechanics	3	1	0	4	PMT
3	CE5340	FEM & Constitutive Modelling in Geomech.	3	1	0	4	PMT
4	HS3050	Professional Ethics	2	0	0	2	HPF
5	DDE2	Dual Degree Elective 2	3	0	0	3	PMT
6	DDE3	Dual Degree Elective 3	3	0	0	3	PMT
		Total Credits :				17	

SEMESTER 9

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4943	Project I	0	0	0	3*	PMP
2	CE4950	VIVA VOCE	0	0	0	2	PMP
3	CE5330	Advanced Foundation Engg.	3	1	0	4	PMT
4	DDE4	Dual Degree Elective 4	3	0	0	3	PMT
5	DDE5	Dual Degree Elective 5	3	0	0	3	PMT
		Total Credits :				12	

* Project (CE4941) grade will be assigned at the end of 10th semester

SEMESTER 10

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4963	Project II	0	0	0	14	PMP
		Total Credits :				14	

Semester	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
Req. Cr.	24	22+6	23	24	23	24	25	17	12	14	214

Category	BES	BET	HPF	HSS	MNS	PIL	PIT	PML	PMP
Req. Cr.	9	17	4	9	9	1	2	10	16

Category	PMT	PPF	PSS	SCY	SMA	SPH	SLS	FRE	EXT
Req. Cr.	89	6	3	7	14	10	2	6	0

Remarks

- Total number of professional major elective courses should be at least eight (other than self-study)
- Electives from Civil Elective List or other equivalents from other departments with the consent of the Faculty Adviser & HoD.
- At the UG level maximum of two elective courses
- Any two of the elective courses can be taken as Pass/Fail courses
- The project training at the end of 8th semester should be in infrastructure project industry / site.
- Free Electives I & II category will be indicated in the grade card according to the course chosen by the student from own department or from other departments such as MA, HS & PH.
- Dual Degree (B.Tech. Honours & M.Tech.)
(Total credit requirement: $214+12 = 226$)
 - **Students** having a CGPA of ≥ 8.5 and who have cleared all the courses in the first attempt can opt for B.Tech (Honours) at the end of the fourth semester.
 - Those who opt for B.Tech (Honours) must register for 12 additional PMT credits.
 - Students can register for a maximum of 2 additional PMT courses in a semester from the Honours basket of courses over and above the courses prescribed in the B.Tech curriculum from 5th semester onwards.
 - Project work is a must for B.Tech (Honours) students in B.Tech programme.
 - Those who have registered for B.Tech (Honours) must maintain an average CGPA of 8.5 from 4th semester onwards. Otherwise, they will be awarded only B.Tech Degree.
 - Extra credits earned by the students will be counted for prizes and awards.

Branch Code: CE27**2014-Batch****Dual Degree (B.Tech. & M.Tech.) in Civil Engineering****Stream: Hydraulic & Water Resources Engineering***(Curriculum for the first six semester is common – refer Page No.19 & 20)***SEMESTER 7**

S.No	Course No	Course Name	L	T	P	C	Category
1	CE3100	Structural Engg. Lab	0	0	3	2	PML
2	CE4010	Estimation & Construction Management	3	1	0	4	PMT
3	CE5470	Surface Water Hydrology	3	1	0	4	PMT
4	DDE1	Dual Degree Elective 1	3	0	0	3	PMT
5	FRE2	Free Elective 2	3	0	0	3	*
6	HSE3	Humanities Elective 3	3	0	0	3	HSS
7	MNS3	Minor Elective 3	3	0	0	3	MNS
8	SSE1	Self-Study Elective 1	3	0	0	3	PSS
		Total Credits :				25	

SEMESTER 8

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4020	Industrial Lecture	0	0	0	1	PIL
2	CE5480	Water Resources Planning & Mgmt	3	1	0	4	PMT
3	HS3050	Professional Ethics	2	0	0	2	HPF
4	DDE2	Dual Degree Elective 2	3	0	0	3	PMT
5	DDE3	Dual Degree Elective 3	3	0	0	3	PMT
		Total Credits :				13	

SEMESTER 9

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4944	Project I	0	0	0	3*	PMP
2	CE4950	VIVA VOCE	0	0	0	2	PMP
3	CE5450	Applied Hydraulic Engg	3	1	0	4	PMT
4	CE5460	Ground Water Engg	3	1	0	4	PMT
5	DDE4	Dual Degree Elective 4	3	0	0	3	PMT
6	DDE5	Dual Degree Elective 5	3	0	0	3	PMT
		Total Credits :				16	

** Project (CE4941) grade will be assigned at the end of 10th semester***SEMESTER 10**

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4964	Project II	0	0	0	14	PMP
		Total Credits :				14	

Semester	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
Req. Cr.	24	22+6	23	24	23	24	25	13	16	14	214

Category	BES	BET	HPF	HSS	MNS	PIL	PIT	PML	PMP
Req. Cr.	9	17	4	9	9	1	2	10	16

Category	PMT	PPF	PSS	SCY	SMA	SPH	SLS	FRE	EXT
Req. Cr.	89	6	3	7	14	10	2	6	0

Remarks

- Total number of professional major elective courses should be at least eight (other than self-study)
- Electives from Civil Elective List or other equivalents from other departments with the consent of the Faculty Adviser & HoD.
- At the UG level maximum of two elective courses
- Any two of the elective courses can be taken as Pass/Fail courses
- The project training at the end of 8th semester should be in infrastructure project industry / site.
- Free Electives I & II category will be indicated in the grade card according to the course chosen by the student from own department or from other departments such as MA, HS & PH.
- Dual Degree (B.Tech. Honours & M.Tech.)
(Total credit requirement: $214+12 = 226$)
 - **Students** having a CGPA of ≥ 8.5 and who have cleared all the courses in the first attempt can opt for B.Tech (Honours) at the end of the fourth semester.
 - Those who opt for B.Tech (Honours) must register for 12 additional PMT credits.
 - Students can register for a maximum of 2 additional PMT courses in a semester from the Honours basket of courses over and above the courses prescribed in the B.Tech curriculum from 5th semester onwards.
 - Project work is a must for B.Tech (Honours) students in B.Tech programme.
 - Those who have registered for B.Tech (Honours) must maintain an average CGPA of 8.5 from 4th semester onwards. Otherwise, they will be awarded only B.Tech Degree.
 - Extra credits earned by the students will be counted for prizes and awards.

Branch Code: CE28
2014-Batch
Dual Degree (B.Tech. & M.Tech.) in Civil Engineering
Stream: Structural Engineering
(Curriculum for the first six semester is common – refer Page No.19 & 20)

SEMESTER 7

S.No	Course No	Course Name	L	T	P	C	Category
1	CE3100	Structural Engg Lab	0	0	3	2	PML
2	CE4010	Estimation & Construction Management	3	1	0	4	PMT
3	CE6780	Advanced Mechanics for structures	3	1	0	4	PMT
4	DDE1	Dual Degree Elective 1	3	0	0	3	PMT
5	FRE2	Free Elective 2	3	0	0	3	
6	HSE4	Humanities Elective 4	3	0	0	3	HSS
7	MNS3	Minor Elective 3	3	0	0	3	MNS
8	SSE1	Self- Study Elective 1	3	0	0	3	PSS
		Total Credits :				25	

SEMESTER 8

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4020	Industrial Lecture	0	0	0	1	PIL
2	CE5610	Finite Element Analysis	4	0	0	4	PMT
3	CE5660	Advanced Design of Metal Structures	3	0	0	3	PMT
4	HS3050	Professional Ethics	2	0	0	2	HPF
5	DDE2	Dual Degree Elective 2	3	0	0	3	PMT
6	DDE3	Dual Degree Elective 3	3	0	0	3	PMT
		Total Credits :				16	

SEMESTER 9

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4945	Project I	0	0	0	4*	PMP
2	CE4950	VIVA VOCE	0	0	0	2	PMP
3	CE5620	Structural Dynamics	4	0	0	4	PMT
4	DDE4	Dual Degree Elective 4	3	0	0	3	PMT
5	DDE5	Dual Degree Elective 5	3	0	0	3	PMT
		Total Credits :				12	

* Project (CE4943) grade will be assigned at the end of 10th semester

SEMESTER 10

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4965	Project II	0	0	0	15	PMP
		Total Credits :				15	

Semester	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
Req. Cr.	24	22+6	23	24	23	24	25	16	12	15	214

Category	BES	BET	HPF	HSS	MNS	PIL	PIT	PML	PMP
Req. Cr.	9	17	4	9	9	1	2	10	17

Category	PMT	PPF	PSS	SCY	SMA	SPH	SLS	FRE	EXT
Req. Cr.	88	6	3	7	14	10	2	6	0

Remarks

- Total number of professional major elective courses should be at least eight (other than self-study)
- Electives from Civil Elective List or other equivalents from other departments with the consent of the Faculty Adviser & HoD.
- At the UG level maximum of two elective courses
- Any two of the elective courses can be taken as Pass/Fail courses
- The project training at the end of 8th semester should be in infrastructure project industry / site.
- Free Electives I & II category will be indicated in the grade card according to the course chosen by the student from own department or from other departments such as MA, HS & PH.
- Dual Degree (B.Tech. Honours & M.Tech.)
(Total credit requirement: $214+12 = 226$)
 - **Students** having a CGPA of ≥ 8.5 and who have cleared all the courses in the first attempt can opt for B.Tech (Honours) at the end of the fourth semester.
 - Those who opt for B.Tech (Honours) must register for 12 additional PMT credits.
 - Students can register for a maximum of 2 additional PMT courses in a semester from the Honours basket of courses over and above the courses prescribed in the B.Tech curriculum from 5th semester onwards.
 - Project work is a must for B.Tech (Honours) students in B.Tech programme.
 - Those who have registered for B.Tech (Honours) must maintain an average CGPA of 8.5 from 4th semester onwards. Otherwise, they will be awarded only B.Tech Degree.
 - Extra credits earned by the students will be counted for prizes and awards.

Branch Code: CE29
2014-Batch
Dual Degree (B.Tech. & M.Tech.) in Civil Engineering
Stream: Transportation Engineering
(Curriculum for the first six semester is common – refer Page No.19 & 20)

SEMESTER 7

S.No	Course No	Course Name	L	T	P	C	Category
1	CE3100	Structural Engg Lab	0	0	3	2	PML
2	CE5530	Pavement Materials	3	0	0	3	PMT
3	CE4010	Estimation & Construction Management	4	0	0	4	PMT
4	CE5810	Urban Transportation Planning	3	0	0	3	PMT
5	DDE1	Dual Degree Elective 1	3	0	0	3	PMT
6	FRE2	Free Elective 2	3	0	0	3	
7	HSE3	Humanities Elective 3	3	0	0	3	HSS
8	MNS3	Minor Elective 3	3	0	0	3	MNS
9	SSE1	Self- Study Elective 1	3	0	0	3	PSS
		Total Credits :				27	

SEMESTER 8

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4020	Industrial Lecture	0	0	0	1	PIL
2	CE5800	Pavement Analysis and Design	3	0	0	3	PMT
3	HS3050	Professional Ethics	2	0	0	2	HPF
4	DDE2	Dual Degree Elective 2	3	0	0	3	PMT
5	DDE3	Dual Degree Elective 3	3	0	0	3	PMT
6	DDE4	Dual Degree Elective 4	3	0	0	3	PMT
		Total Credits :				15	

SEMESTER 9

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4946	Project I	0	0	0	3*	PMP
2	CE4950	VIVA VOCE	0	0	0	2	PMP
3	CE5831	Transportation Engineering Studio	4	0	0	4	PMT
4	DDE5	Dual Degree Elective 5	3	0	0	3	PMT
5	DDE6	Dual Degree Elective 6	3	0	0	3	PMT
		Total Credits :				12	

* Project (CE4941) grade will be assigned at the end of 10th semester

SEMESTER 10

S.No	Course No	Course Name	L	T	P	C	Category
1	CE4966	Project II	0	0	0	15	PMP
		Total Credits :				15	

Semester	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
Req. Cr.	24	22+6	23	24	23	24	27	15	12	15	215

Category	BES	BET	HPF	HSS	MNS	PIL	PIT	PML	PMP
Req. Cr.	9	17	4	9	9	1	2	10	17

Category	PMT	PPF	PSS	SCY	SMA	SPH	SLS	FRE	EXT
Req. Cr.	89	6	3	7	14	10	2	6	0

Remarks

- Total number of professional major elective courses should be at least eight (other than self-study)
- Electives from Civil Elective List or other equivalents from other departments with the consent of the Faculty Adviser & HoD.
- At the UG level maximum of two elective courses
- Any two of the elective courses can be taken as Pass/Fail courses
- The project training at the end of 8th semester should be in infrastructure project industry / site.
- Free Electives I & II category will be indicated in the grade card according to the course chosen by the student from own department or from other departments such as MA, HS & PH.
- Dual Degree (B.Tech. Honours & M.Tech.)
(Total credit requirement: $215+12 = 227$)
 - **Students** having a CGPA of ≥ 8.5 and who have cleared all the courses in the first attempt can opt for B.Tech (Honours) at the end of the fourth semester.
 - Those who opt for B.Tech (Honours) must register for 12 additional PMT credits.
 - Students can register for a maximum of 2 additional PMT courses in a semester from the Honours basket of courses over and above the courses prescribed in the B.Tech curriculum from 5th semester onwards.
 - Project work is a must for B.Tech (Honours) students in B.Tech programme.
 - Those who have registered for B.Tech (Honours) must maintain an average CGPA of 8.5 from 4th semester onwards. Otherwise, they will be awarded only B.Tech Degree.
 - Extra credits earned by the students will be counted for prizes and awards.

Branch Code: CE22

2014-Batch

Dual Degree (B.Tech. in Civil Engineering and M.Tech. in Applied Mechanics)

(Curriculum for the first six semester is common – refer Page No.19 & 20)

SEMESTER 7

S.No	Course No	Course Name	L	T	P	C	Category
1	AM5010	Biomechanics	3	0	0	3	PMT
2	AM5390	Advanced Structural Mechanics	3	0	0	3	PMT
3	AM5530	Advanced Fluid Mechanics	3	0	0	3	PMT
4	CE3100	Structural Engg Lab	0	0	3	2	PML
5	CE4010	Estimation & Construction Management	3	1	0	4	PMT
6	HS	HS Elective III	3	0	0	3	HSS
7	MNS3	Minor Elective 3	3	0	0	3	MNS
8	SSE1	Self-Study Elective 1	3	0	0	3	PSS
		Total Credits :				24	

SEMESTER 8

S.No	Course No	Course Name	L	T	P	C	Category
1	FRE2	Free Elective II	3	0	0	3	
2	CE4020	Industrial Lecture (Pass / Fail)	0	0	3	1	PIL
3	AM	Specialization Core I [#]	3	0	0	3	PMT
4	AM	Specialization Core II [#]	3	0	0	3	PMT
5	AM	Specialization Core Lab [#]	0	0	3	2	PML
6	HS3050	Professional Ethics	2	0	0	2	HPF
7		MTech Elective I	3	0	0	3	PMT
8		MTech Elective II	3	0	0	3	PMT
		Total Credits	18	0	6	20	

#- Students opting Fluid Mechanics group will credit two courses from Fluid Mechanics specialization courses and respective Laboratory. Students opting for solid mechanics will credit two solid Mechanics courses and respective Laboratory.

SPECIALIZATION CORE / LABORATORY

S.No	Course No	Course Name	L	T	P	C	Category
Fluid Mechanics							
1	AM 5570	Introduction to Turbulence	3	0	0	3	PMT
2	AM 5540	Hydrodynamics	3	0	0	3	PMT
3	AM 5630	Foundations of CFD	3	0	0	3	PMT
4	AM 5820	Wind Tunnel and Numerical Experiments	0	0	3	2	PML
Solid Mechanics							
1	AM 5240	Experimental Stress Analysis	3	0	0	3	PMT
2	AM 5450	Discrete Element Methods in Engineering Analysis	3	0	0	3	PMT
3	AM 5620	Theory of Plates and Shells	3	0	0	3	PMT
4	AM 5400	Experimental Stress Analysis Laboratory	0	0	3	2	PML

SEMESTER 9

S.No	Course No	Course Name	L	T	P	C	Category
1		M.Tech Elective III	3	0	0	3	PMT
2		M.Tech Elective IV	3	0	0	3	PMT
3	AM5490*	Project I	0	0	0	5*	PMP
		Total Credits				6	

* Project (AM5490*) grade will be assigned in 10th semester

SEMESTER 10

S.No	Course No	Course Name	L	T	P	C	Category
1	AM5490	PROJECT II	0	0	0	18	PMP
		Total Credits	0	0	0	18	

Semester	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
Req. Cr.	24	22+6	23	24	23	22	24	20	6	18	214

Category	BES	BET	HPF	HSS	MNS	PIL	PIT	PML	PMP
Req. Cr.	9	17	4	9	9	1	2	12	18

Category	PMT	PPF	PSS	SCY	SMA	SPH	SLS	FRE	EXT
Req. Cr.	85	6	3	7	14	10	2	6	0

Remarks

- At the UG level maximum of two elective courses
- Any two of the elective courses can be taken as Pass/Fail courses
- Free Electives I & II category will be indicated in the grade card according to the course chosen by the student from own department or from other departments such as MA, HS & PH.
- Dual Degree (B.Tech. Honours & M.Tech.)

(Total credit requirement: 214+12 = 226)

- **Students** having a CGPA of ≥ 8.5 and who have cleared all the courses in the first attempt can opt for B.Tech (Honours) at the end of the fourth semester.
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- Extra credits earned by the students will be counted for prizes and awards.