CIVIL ENGINEERING (Dual Degree.)

COURSE CURRICULUM FOR THE NEW PROGRAMME w.e.f. 2007 BATCH

Semester I

Course code	Course Name	Credit Structure			
		L	**T**	**P**	**C**
CH 103+	Chemistry	**2**	**1**	**0**	**6**
CS 101	Computer Programming	**2**	**0**	**2**	**6**
HS 101	Economics	**3**	**0**	**0**	**6**
MA 105	Calculus	**3**	**1**	**0**	**8**
PH 103*	Electricity and Magnetism	**2**	**1**	**0**	**6**
PH 105*	Modern Physics	**2**	**1**	**0**	**6**
CH 117+	Chemistry Lab	**0**	**0**	**3**	**3**
ME 113*	Workshop Practice	**0.5**	**0**	**3**	**4**
ME 119*	Engineering Graphics and Drawing	**1**	**0**	**3**	**5**
PH 117+	Physics Lab	**0**	**0**	**3**	**3**
NC 101#	National Cadet Corps (NCC)	**0**	**0**	**0**	**P/NP**
NO 101#	National Sports Organization (NSS)	**0**	**0**	**0**	**P/NP**
NS 101#	National Service Scheme (NSO)	**0**	**0**	**0**	**P/NP**

* Any one of these two courses and any one of these Lab courses only for **D3 D4**
+ Only for D1 D2
# Any one of these three P/NP courses

Semester – II

Course Code	Course Name	Credit Structure			
		L	**T**	**P**	**C**
MA 106 And MA 108	Linear Algebra and Ordinary Differential Equations I	**3**	**1**	**0**	**8**
CH 103+	Chemistry	**2**	**1**	**0**	**6**
PH 103*	Electricity and Magnetism	**2**	**1**	**0**	**6**
PH 105*	Modern Physics	**3**	**1**	**0**	**8**
CE 102	Engineering Mechanics	**2**	**1**	**0**	**6**
IC 102	Data Analysis and Interpretations	**2**	**1**	**0**	**6**
CH 117*	Chemistry Lab.	**0**	**0**	**3**	**3**
ME 113+	Workshop Practice	**0.5**	**0**	**3**	**4**
ME 119+	Engineering Graphics and Drawing	**0**	**1**	**3**	**5**
PH 117*	Physics Lab.	**0**	**0**	**3**	**3**
NC 102#	National Cadet Corps (NCC)	**0**	**0**	**0**	**P/NP**
NO 102#	National Sports Organization (NSS)	**0**	**0**	**0**	**P/NP**
NS 102#	National Service Scheme (NSO)	**0**	**0**	**0**	**P/NP**

* Any one of these two courses and any one of these Lab courses only for **D1 D2**
+ Only for D3 D4
# Any one of these three P/NP courses

CIVIL ENGG. DEPT. (Dual Degree)
COURSE CURRICULUM FOR THE NEW PROGRAMME w.e.f. 2007 BATCH

Semester III						**Semester –IV**					
Course code	**Course Name**	**Credit Structure**				**Course Code**	**Course Name**	**Credit Structure**			
		L	**T**	**P**	**C**			**L**	**T**	**P**	**C**
MA 207	Differential Equations II (half Semester course)	**3**	**1**	**0**	**4**	ES 200 And HS 200	Environmental Studies: Science and Engg And Environmental Studies	**3** **3**	**0** **0**	**0** **0**	**3** **3**
EE 101	Introduction to Electrical and Electronics Circuits	**3**	**1**	**0**	**8**	CE 222	Structural Mechanics I	**2**	**1**	**0**	**6**
IC 211	Experimental and Measurement Lab	**0**	**0.5**	**3**	**4**	CE 206	Hydraulic Engineering	**2**	**1**	**0**	**6**
CE 201	Solid Mechanics	**3**	**1**	**0**	**8**	CE 204	Geodesy	**2**	**1**	**0**	**6**
CE 211	Solid Mechanics Lab	**0**	**0**	**3**	**3**	CE 216	Geodesy Lab	**0**	**0**	**3**	**3**
CE 205	Fluid Mechanics	**2**	**1**	**0**	**6**	CE 218	Hydraulic Design Lab	**0**	**1**	**3**	**5**
CE 213	Fluid Mechanics Lab	**0**	**0**	**3**	**3**	CE 463*	Probablistic and Statistical Method in Civil Engineering	**2**	**1**	**0**	**6**
	Total	**11**	**4.5**	**9**	**36**		Total	**11**	**5**	**6**	**38**

* Honors component

CIVIL ENGG. DEPT. (Dual Degree)

CIVIL ENGG. DEPT. (Dual Degree)
COURSE CURRICULUM FOR THE NEW PROGRAMME w.e.f. 2007 BATCH

Semester V						**Semester –VI**					
Course code	**Course Name**	**Credit Structure**				**Course Code**	**Course Name**	**Credit Structure**			
		L	**T**	**P**	**C**			**L**	**T**	**P**	**C**
HS 301/ HS 303/ HS 305/ HS 307	Philosophy/ Psychology/ Literature/ Sociology	**3**	**0**	**0**	**6**	CE 304	Soil Mechanics II	**2**	**1**	**0**	**6**
CE 303	Soil Mechanics I	**2**	**1**	**0**	**6**	CE 310	Transportation Engineering I	**2**	**1**	**0**	**6**
CE 317	Structural Mechanics II	**2**	**1**	**0**	**6**	CE 308	Design of Structures II	**2**	**1**	**0**	**6**
CE 307	Design of Structures I	**2**	**1**	**0**	**6**		Institute Elective I (from any dept./centre/school/IDP)	**2**	**1**	**0**	**6**
CE 319	Soil Mechanics Lab I	**0**	**0**	**3**	**3**	CE 314	Soil Mechanics Lab II	**0**	**0**	**3**	**3**
CE 315	Design Lab I	**0**	**0**	**3**	**3**	CE 328	Transportation Engineering Lab I	**0**	**0**	**3**	**3**
CE 321	Materials and Structures Lab	**0**	**0**	**3**	**3**	CE 318	Design Lab II	**0**	**0**	**3**	**3**
CE397*	Seminar	**0**	**0**	**3**	**3**	CE 326*	Drawing and Analysis Software Lab	**0**	**0**	**3**	**3**
	Total	**9**	**3**	**12**	**36**		Total	**8**	**4**	**12**	**36**

* Honors component

CIVIL ENGG. DEPT. (Dual Degree)

CIVIL ENGG. DEPT. (Dual Degree)
COURSE CURRICULUM FOR THE NEW PROGRAMME w.e.f. 2007 BATCH

Semester VII

Course code	Course Name	Credit Structure			
		L	**T**	**P**	**C**
CE 415	Transportation Engineering II	**2**	**1**	**0**	**6**
CE 623	Advanced Solid Mechanics	**3**	**0**	**0**	**6**
CE 616	Structural Dynamics	**3**	**0**	**0**	**6**
CE 620*	Introduction to Finite Element Methods	**2**	**1**	**0**	**6**
CE407/*	Foundation Engineering / Elective BI+	**2**	**1**	**0**	**6**
CE 412	Transportation Engineering Lab II	**0**	**0**	**3**	**3**
	Total	**12**	**3**	**3**	**33**

Semester –VIII

Course Code	Course Name	Credit Structure			
		L	**T**	**P**	**C**
	Elective I	**3**	**0**	**0**	**6**
	Elective II	**3**	**0**	**0**	**6**
	Elective III	**3**	**0**	**0**	**6**
	Elective BII/ Institute Elective	**2**	**1**	**0**	**6**
	Elective BIII	**2**	**1**	**0**	**6**
	Elective IV	**3**	**0**	**0**	**6**
	Total	**16**	**2**	**0**	**36**

(+ Electives BI to BIV are from list of B.Tech. electives A) (* Honors component)
(Electives I to VII are from list of M.Tech. Structural Engineering Courses)

CIVIL ENGG. DEPT. (Dual Degree)

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COURSE CURRICULUM FOR THE NEW PROGRAMME w.e.f. 2007 BATCH

Semester IX

Course code	Course Name	Credit Structure			
		L	**T**	**P**	**C**
CE 403 /	Advanced Design of Structures/ Elective BIV	**2**	**1**	**0**	**6**
	Elective V	**3**	**0**	**0**	**6**
CE 593	DDP-I				**36**
	Total	**8**	**1**	**0**	**48**

Semester –X

Course Code	Course Name	Credit Structure			
		L	**T**	**P**	**C**
	Elective VI	**3**	**0**	**0**	**6**
	Elective VII	**3**	**0**	**0**	**6**
CE 594	DDP-II				**36**
	Total	**6**	**0**	**0**	**48**

Electives ‘A’

CE 482	Construction Management
CE 324	Engineering Law
CE 465	Numerical Methods in Civil Engineering
CE 414	Water Resources and Waste Water Engineering
CE 641	Environmental Geomechanics
CE 402	Introduction to Geotechnical Earthquake Engineering
CE 416	Pavement Analysis and Design
CE 418	Introduction to Finite Elements Methods
CE 419	Physical Modelling in Geotechnics
CE 403	Advanced Design of Structures
CE 407	Foundation Engineering
CE 410	Introduction to Offshore Engineering
CE 422	Hydraulic Structures
CE 424	Ground Water Hydrology
CE 442	Machine Foundations
CE 444	Advanced Geotechnical Analysis
CE 448	Prestressed Concrete Design
CE 463	Probabilistic and Statistical Methods in Civil Engineering
CE 472	Transportation Planning and Management
CE 478	Plastic Analysis and Design
CE 480	Computer Aided Design of Civil Engineering Systems
CE 484	Concrete Technology
CE 486	Rock Mechanics & Tunnelling Technology
CE 488	Environmental Geotechnics
CE 490	Elements of Remote Sensing
CE 492	Reinforced Earth
CE 610	Earthquake Engineering

CE 620	Advanced Finite Element Methods
CE 645	Geotechnical Centrifuge Modelling
CE 676	Water Resources System
CE 740	Traffic Engineering
CE 748	Materials, Construction and Design of Pavements
CE 746	Reinforced Earth and Geotextiles
CE 754	Economic Evaluation and Analysis of Transportation Projects
CE 632	Ground Improvement