M.Tech. (Civil) (Session 2009-10 onwards)

SCHEME OF M.TECH. (CIVIL) SOIL MECHANICS AND FOUNDATION ENGINEERING

Sr. No	Course No.	Subject	Teaching Schedule				Credit Points	Duration of Exam (Hrs.)
			L	T	P/D	Total		
		SEMESTER -I						
1	CET 661	Engineering Properties of Soils	4	1	-	5	4.5	3
2	CET 663	Foundation Engineering	4	1	-	5	4.5	3
3	CET 665	Rock Mechanics -I	4	1	-	5	4.5	3
4		Elective -I	4	1	-	5	4.5	3
5	CET 667	Special Assignment	-	-	3	3	1.5	3
6	CET 669	Seminar -I	-	1	-	1	0.5	-
			16	5	3	24	20	-
		SEMESTER-II						
1	CET 662	Soil Dynamics & Machine Foundations	4	1	-	5	4.5	3
2	CET 664	Rock Mechanics -II	4	1	-	5	4.5	3
3	CET 666	Earth Dams & Slope Stability	4	1	-	5	4.5	3
4		Elective -II	4	1	-	5	4.5	3
5		Elective -III	4	1	-	5	4.5	3
			20	5	-	25	22.5	-
		SEMESTER - III						
1	CET 671	Earth Pressure	4	1	-	5	4.5	3
2	CET 673	Clay Mineralogy	4	1	-	5	4.5	3
3	CET 675	Theoretical Soil Mechanics	4	1	-	5	4.5	3
4		Elective - IV	4	1	-	5	4.5	3
5	CET 677	Special Lab Assignment	-	-	3	3	1.5	3
6	CET 679	Seminar - II	-	1	-	1	0.5	-
			16	5	3	24	20	-
		SEMESTER -IV						
1		Dissertation	-	-	-	-		-
Grand total			-	-	-	-		-

LIST OF ELECTIVES

CET 668	Ground Improvement Engineering
CET 670	Design of Foundation Systems
CET 672	Geotechnical Exploration and Advanced Soil Testing
CET 674	Advanced Rock Mechanics
CET 676	Neuro-fuzzy Applications in Civil Engineering
CET 678	Case Histories in Geotechnical Engineering
CET 680	Computer Aided Design of Foundations
CET 681	Flow through Porous Media
CET 692	Pavement Analysis & Design
CET 683	Engineering Geology
CET 684	Modelling and Simulation
CET 685	Computational and Statistical Methods
CET 741	Environmental Impact Assessment
CET 644	Soil-Structure Interaction

SCHEME OF M.TECH. (CIVIL) TRANSPORTATION ENGINEERING

Sr. No	Course No.	Subject	Teaching Schedule				Credit Points	Duration of Exam (Hrs.)
			L	T	P/D	Total		
		SEMESTER -I						
1	CET 691	Traffic Engineering	4	1	-	5	4.5	3
2	CET 693	Geometric Design	4	1	-	5	4.5	3
3	CET 695	Pavement Materials	4	1	-	5	4.5	3
4		Elective-I	4	1	-	5	4.5	3
5	CET 697	Transportation Lab	-	-	3	3	1.5	3
6	CET 699	Seminar-I	-	1	-	1	0.5	-
			16	5	3	24	20	-
		SEMESTER -II						
1	CET 692	Pavement Analysis & Design	4	1	-	5	4.5	3
2	CET 694	Pavement Construction, Maintenance and Management	4	1	-	5	4.5	3
3	CET 696	Transportation Planning	4	1	-	5	4.5	3
4		Elective -II	4	1	-	5	4.5	3
5		Elective -III	4	1	-	5	4.5	3
			20	5	-	25	22.5	-
		SEMESTER - III						
1	CET 701	Transportation Economics and Finance	4	1	-	5	4.5	3
2	CET 703	Public Transportation	4	1	-	5	4.5	3
3	CET 705	Transportation Safety and Environment	4	1	-	5	4.5	3
4		Elective - IV	4	1	-	5	4.5	3
5	CET 707	Computational Lab.	-	-	3	3	1.5	3
6	CET 709	Seminar – II	-	1	-	1	0.5	-
			16	5	3	24	20	-
		SEMESTER -IV						
1		Dissertation	-	-	-	-		-
Grand total			-	-	-	-		-

LIST OF ELECTIVES

CET 710	Statistics and Operation Research
CET 711	GIS in Transportation
CET 712	Concrete Technology
CET 713	Project Management
CET 714	Transportation Drainage Systems
CET 643	Design of Bridges
CET 716	Land Use and Transportation Planning
CET 717	Rail Transportation Systems Planning and Design
CET 718	Airport System Planning and Design
CET 719	Advanced Geology
CET 720	Transportation and Traffic Infrastructure Design
CET 668	Ground Improvement Engineering
CET 741	Environmental Impact Assessment

SCHEME OF M.TECH. (CIVIL) ENVIRONMENTAL ENGINEERING

Sr. No	Course No.	Subject	Teaching Schedule				Credit Points	Duration of Exam (Hrs.)
			L	T	P/D	Total		
		SEMESTER -I						
1	CET 731	Environmental Chemistry and Microbiology	4	1	-	5	4.5	3
2	CET 733	Water and Wastewater Treatment Processes	4	1	-	5	4.5	3
3	CET 735	Advance Water Supply and Wastewater Management	4	1	-	5	4.5	3
4		Elective-I	4	1	-	5	4.5	3
5	CET 737	Special Lab. Assignment-I	-	-	3	3	1.5	3
6	CET 739	Seminar-I	-	1	-	1	0.5	-
			16	5	3	24	20	-
		SEMESTER -II						
1	CET 732	Design of Water Treatment Processes	4	1	-	5	4.5	3
2	CET 734	Air Pollution and Control	4	1	-	5	4.5	3
3	CET 736	Solid Waste Management	4	1	-	5	4.5	3
4		Elective -II	4	1	-	5	4.5	3
5		Elective -III	4	1	-	5	4.5	3
			20	5	-	25	22.5	-
		SEMESTER - III						
1	CET 741	Environmental Impact Assessment	4	1	-	5	4.5	3
2	CET 743	Industrial Waste Management	4	1	-	5	4.5	3
3	CET 745	Design of Wastewater Treatment Processes	4	1	-	5	4.5	3
4		Elective - IV	4	1	-	5	4.5	3
5	CET 747	Special Lab. Assignment-II	-	-	3	3	1.5	3
6	CET 749	Seminar – II	-	1	-	1	0.5	-
			16	5	3	24	20	-
		SEMESTER -IV						
1		Dissertation	-	-	-	-		-
Grand total			-	-	-	-		-

LIST OF ELECTIVES

CET 738	Geographic Information System (GIS) in Environmental Engineering
CET 740	Environmental Planning and Management
CET 742	Surface Water Quality Modeling and Control
CET 744	Water Quality Management
CET 746	Hazardous Waste Management
CET 748	Life Cycle Analysis and Design for Environment
CET 750	Advance Wastewater Treatment
CET 751	Bioremediation: Principles and Application
CET 752	Air Quality Modeling
CET 753	Environmental Risk Assessment
CET 754	Advanced Computational Methods and Optimization
CET 755	Ground Water Flow and Pollution Modeling

SCHEME OF M.TECH. (CIVIL) WATER RESOURCES ENGINEERING

Sr. No	Course No.	Subject	Teaching Schedule				Credit Points	Duration of Exam (Hrs.)
			L	T	P/D	Total		
		SEMESTER -I						
1	CET 601	Advanced Fluid Mechanics	4	1	-	5	4.5	3
2	CET 603	Open Channel Hydraulics	4	1	-	5	4.5	3
3	CET 605	Engineering Hydrology	4	1	-	5	4.5	3
4		Elective-I	4	1	-	5	4.5	3
5	CET 607	Special Assignment	-	-	3	3	1.5	3
6	CET 609	Seminar-I	-	1	-	1	0.5	-
			16	5	3	24	20	-
		SEMESTER -II						
1	CET 602	Water Resources Planning & Systems Engineering	4	1	-	5	4.5	3
2	CET 604	Design of Hydraulic Structures	4	1	-	5	4.5	3
3	CET 606	Ground Water Engineering	4	1	-	5	4.5	3
4		Elective -II	4	1	-	5	4.5	3
5		Elective -III	4	1	-	5	4.5	3
			20	5	-	25	22.5	-
		SEMESTER - III						
1	CET 611	Advanced Irrigation Engineering and Drainage	4	1	-	5	4.5	3
2	CET 613	Modelling Analysis and Simulation	4	1	-	5	4.5	3
3	CET 615	Watershed Management	4	1	-	5	4.5	3
4		Elective - IV	4	1	-	5	4.5	3
5	CET 617	Special Lab. Assignment	-	-	3	3	1.5	3
6	CET 619	Seminar – II	-	1	-	1	0.5	-
			16	5	3	24	20	-
		SEMESTER -IV						
1		Dissertation	-	-	-	-		-
Grand total			-	-	-	-		-

LIST OF ELECTIVES

CET 608	Embankment Dams
CET 610	Hydro Power Engineering
CET 612	River Engineering and Sediment Transport
CET 614	Computational Methods in Fluid Mechanics
CET 616	Wind Engineering
CET 618	Environmental Impact Assessment of Civil Engineering Projects
CET 620	Remote Sensing for Water Resources Systems
CET 621	Probabilistic Methods in Civil Engineering
CET 622	Structural Design of Canal Structures
CET 741	Environmental Impact Assessment

SCHEME OF M.TECH. (CIVIL) STRUCTURAL ENGINEERING

Sr. No	Course No.	Subject	Teaching Schedule				Credit Points	Duration of Exam (Hrs.)
			L	T	P/D	Total		
		SEMESTER -I						
1	CET 631	Advanced Structural Analysis	4	1	-	5	4.5	3
2	CET 633	Advanced RCC Design	4	1	-	5	4.5	3
3	CET 635	Structural Dynamics	4	1	-	5	4.5	3
4		Elective-I	4	1	-	5	4.5	3
5	CET 637	Special Lab Assignment	-	-	3	3	1.5	3
6	CET 639	Seminar-I	-	1	-	1	0.5	-
			16	5	3	24	20	-
		SEMESTER -II						
1	CET 632	Theory of Plates	4	1	-	5	4.5	3
2	CET 634	Earthquake Analysis and Design of Structures	4	1	-	5	4.5	3
3	CET 636	Structural Mechanics and Stability	4	1	-	5	4.5	3
4		Elective -II	4	1	-	5	4.5	3
5		Elective -III	4	1	-	5	4.5	3
			20	5	-	25	22.5	-
		SEMESTER - III						
1	CET 641	Advanced Design of Steel Structures	4	1	-	5	4.5	3
2	CET 643	Design of Bridges	4	1	-	5	4.5	3
3	CET 645	Advanced Numerical Analysis	4	1	-	5	4.5	3
4		Elective - IV	4	1	-	5	4.5	3
5	CET 647	Special Assignment	-	-	3	3	1.5	3
6	CET 649	Seminar – II	-	1	-	1	0.5	-
			16	5	3	24	20	-
		SEMESTER -IV						
1		Dissertation	-	-	-	-		-
Grand total			-	-	-	-		-

LIST OF ELECTIVES

CET 638	Design of Pre-stressed Concrete Structures
CET 640	Modern Construction Techniques
CET 642	Finite Element Method
CET 644	Soil Structure Interaction
CET 646	Programming and Computer Aided Design of Structures
CET 648	Reliability Analysis and Design of Structures
CET 650	Expert Systems, Neural Networks and Fuzzy Systems
CET 651	Analysis and Design of Shell Structures
CET 663	Foundation Engineering
CET 692	Pavement Analysis and Design
CET 741	Environmental Impact Assessment