



JAGADGURUKUL
UNIVERSITY

Faculty of Engineering & Technology

M. Tech.
(Civil Engineering)
(2015-16)

Program Structure

M.Tech. (CE) Course Structure (2015-16) (ENVIRONMENTAL ENGINEERING)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits
MTCEEV101	Energy & Environment	3	0	1	50	100	150	4
MTCEEV102	Advanced Water Treatment Technology	3	0	1	50	100	150	4
MTCEEV103	Advanced Waste Water Treatment Technology	3	0	1	50	100	150	4
Electives (Any One)								
MTCEEV104A	Statistical and Mathematical Techniques	3	0	1	50	100	150	4
MTCEEV104B	Noise and Thermal Pollution	3	0	1	50	100	150	4
MTCEEV104C	Environmental Geo technology	3	0	1	50	100	150	4
PRACTICALS/VIVA VOCE								
MTCEEV105	Advanced Water Treatment Lab	0	2	0	60	40	100	1
TOTAL		12	2	4	260	440	700	17

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits
MTCEEV201	Environmental Policies & Legislation	3	0	1	50	100	150	4
MTCEEV202	Industrial Waste Treatment	3	0	1	50	100	150	4
MTCEEV203	Environment Impact Assessment & Auditing	3	0	1	50	100	150	4
Electives (Any One)								
MTCEEV204A	Solid Waste Management	3	0	1	50	100	150	4
MTCEEV204B	Hydrology And Applied Hydraulics	3	0	1	50	100	150	4
MTCEEV204C	Environmental Chemistry & Microbiology	3	0	1	50	100	150	4
PRACTICALS/VIVA VOCE								
MTCEEV205	Industrial Waste Treatment Lab	0	2	0	60	40	100	1
TOTAL		12	2	4	260	440	700	17

M.Tech. (CE), Semester-III II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCEEV301	Air Pollution & Its Control	3	0	1	50	100	150	4	
MTCEEV302	Hazardous Waste Treatment	3	0	1	50	100	150	4	
MTCEEV303	Environment & Health	3	0	1	50	100	150	4	
Electives (Any One)									
MTCEEV304A	Ground Water Pollution	3	0	1	50	100	150	4	
MTCEEV304B	Planning And Design Of Environmental Facilities	3	0	1	50	100	150	4	
MTCEEV304C	Indoor Air Quality	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCEEV305	Seminar	0	0	0	60	40	100	2	
	TOTAL	12	0	4	260	440	700	18	

M.Tech. (CE), Semester-IV II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			Credits
Code	Subject/Paper	L	T	P	IA	EA	Total		
MTCEEV401	Dissertation	0	0	0	300	400	700	12	
	TOTAL				300	400	700	12	

M.Tech. (CE) Course Structure (2015-16)

(Transportation Engineering)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCETE101	Traffic Engineering-I	3	0	1	50	100	150	4	
MTCETE102	Highway Materials	3	0	1	50	100	150	4	
MTCETE103	Pavement analysis and Design	3	0	1	50	100	150	4	
Electives (Any One)									
MTCETE104A	Statistical and Mathematical Techniques	3	0	1	50	100	150	4	
MTCETE104B	Ground Improvement Techniques	3	0	1	50	100	150	4	
MTCETE104C	Intelligent Transportation system	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCETE105	Ground Improvement Techniques Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCETE201	Traffic Engineering II	3	0	1	50	100	150	4	
MTCETE202	Urban Transportation Planning I	3	0	1	50	100	150	4	
MTCETE203	Highway Geometric Design	3	0	1	50	100	150	4	
Electives (Any One)									
MTCETE204A	Bridge Engineering	3	0	1	50	100	150	4	
MTCETE204B	Transportation Planning	3	0	1	50	100	150	4	
MTCETE204C	Highway Construction	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCETE205	Highway Material Testing Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits
MCETE301	Pavement Management System	3	0	1	50	100	150	4
MCETE302	Urban Transportation Planning II	3	0	1	50	100	150	4
MCETE303	Traffic Flow Theory	3	0	1	50	100	150	4
Electives (Any One)								
MCETE304A	GIS Application in Transportation Engineering	3	0	1	50	100	150	4
MCETE304B	Transportation Facility Design	3	0	1	50	100	150	4
MCETE304C	Intelligent Transport System	3	0	1	50	100	150	4
PRACTICALS/VIVA VOCE								
MTCETE305	Seminar	0	0	0	60	40	100	2
	TOTAL	12	0	4	260	440	700	18

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			Credits
Code	Subject/Paper	L	T	P	IA	EA	Total	
MTCETE401	Dissertation	0	0	0	300	400	700	12
	TOTAL				300	400	700	12

M.Tech. (CE) Course Structure (2015-16) (Structure Engineering)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCESE101	Theory Of Elasticity And Plasticity	3	0	1	50	100	150	4	
MTCESE102	Aseismic Design	3	0	1	50	100	150	4	
MTCESE103	Prestressed Concrete	3	0	1	50	100	150	4	
Electives (Any One)									
MTCESE104A	Statistical and Mathematical Techniques	3	0	1	50	100	150	4	
MTCESE104B	Ground Improvement Techniques	3	0	1	50	100	150	4	
MTCESE104C	Structural Dynamics	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCESE105	Ground Improvement Techniques Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCESE201	Advanced Concrete Design	3	0	1	50	100	150	4	
MTCESE202	Advanced Steel Structures	3	0	1	50	100	150	4	
MTCESE203	Design Of Bridges	3	0	1	50	100	150	4	
Electives (Any One)									
MTCESE204A	Maintenance And Rehabilitation Of Structures	3	0	1	50	100	150	4	
MTCESE204B	Advanced Theory Of Concrete Structures	3	0	1	50	100	150	4	
MTCESE204C	Design Of Substructures	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCESE205	Non-destructive testing Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCESE301	Disaster Mitigation And Management	3	0	1	50	100	150	4	
MTCESE302	Construction Techniques And Management	3	0	1	50	100	150	4	
MTCESE303	Advanced Concrete Technology	3	0	1	50	100	150	4	
Electives (Any One)									
MTCESE304A	High Rise Structures	3	0	1	50	100	150	4	
MTCESE304B	Theory Of Plates And Shells	3	0	1	50	100	150	4	
MTCESE304C	Advanced Foundation Engineering	3	0	1	50	100	150	4	
<i>PRACTICALS/VIVA VOCE</i>									
MTCESE305	Seminar	0	0	0	60	40	100	2	
	TOTAL	12	0	4	260	440	700	18	

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			Credits
Code	Subject/Paper	L	T	P	IA	EA	Total		
MTCESE401	Dissertation	0	0	0	300	400	700	12	
	TOTAL				300	400	700	12	



Faculty of Engineering & Technology

M. Tech.
(Civil Engineering)
(2016-17)

Program Structure

M.Tech. (CE) Course Structure (2016-17) (ENVIRONMENTAL ENGINEERING)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits
MTCEEV101	Energy & Environment	3	0	1	50	100	150	4
MTCEEV102	Advanced Water Treatment Technology	3	0	1	50	100	150	4
MTCEEV103	Advanced Waste Water Treatment Technology	3	0	1	50	100	150	4
Electives (Any One)								
MTCEEV104A	Statistical and Mathematical Techniques	3	0	1	50	100	150	4
MTCEEV104B	Noise and Thermal Pollution	3	0	1	50	100	150	4
MTCEEV104C	Environmental Geo technology	3	0	1	50	100	150	4
PRACTICALS/VIVA VOCE								
MTCEEV105	Advanced Water Treatment Lab	0	2	0	60	40	100	1
TOTAL		12	2	4	260	440	700	17

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits
MTCEEV201	Environmental Policies & Legislation	3	0	1	50	100	150	4
MTCEEV202	Industrial Waste Treatment	3	0	1	50	100	150	4
MTCEEV203	Environment Impact Assessment & Auditing	3	0	1	50	100	150	4
Electives (Any One)								
MTCEEV204A	Solid Waste Management	3	0	1	50	100	150	4
MTCEEV204B	Hydrology And Applied Hydraulics	3	0	1	50	100	150	4
MTCEEV204C	Environmental Chemistry & Microbiology	3	0	1	50	100	150	4
PRACTICALS/VIVA VOCE								
MTCEEV205	Industrial Waste Treatment Lab	0	2	0	60	40	100	1
TOTAL		12	2	4	260	440	700	17

M.Tech. (CE), Semester-III II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCEEV301	Air Pollution & Its Control	3	0	1	50	100	150	4	
MTCEEV302	Hazardous Waste Treatment	3	0	1	50	100	150	4	
MTCEEV303	Environment & Health	3	0	1	50	100	150	4	
Electives (Any One)									
MTCEEV304A	Ground Water Pollution	3	0	1	50	100	150	4	
MTCEEV304B	Planning And Design Of Environmental Facilities	3	0	1	50	100	150	4	
MTCEEV304C	Indoor Air Quality	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCEEV305	Seminar	0	0	0	60	40	100	2	
	TOTAL	12	0	4	260	440	700	18	

M.Tech. (CE), Semester-IV II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			Credits
Code	Subject/Paper	L	T	P	IA	EA	Total		
MTCEEV401	Dissertation	0	0	0	300	400	700	12	
	TOTAL				300	400	700	12	

M.Tech. (CE) Course Structure (2016-17) (Transportation Engineering)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCETE101	Traffic Engineering-I	3	0	1	50	100	150	4	
MTCETE102	Highway Materials	3	0	1	50	100	150	4	
MTCETE103	Pavement analysis and Design	3	0	1	50	100	150	4	
Electives (Any One)									
MTCETE104A	Statistical and Mathematical Techniques	3	0	1	50	100	150	4	
MTCETE104B	Ground Improvement Techniques	3	0	1	50	100	150	4	
MTCETE104C	Intelligent Transportation system	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCETE105	Ground Improvement Techniques Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCETE201	Traffic Engineering II	3	0	1	50	100	150	4	
MTCETE202	Urban Transportation Planning I	3	0	1	50	100	150	4	
MTCETE203	Highway Geometric Design	3	0	1	50	100	150	4	
Electives (Any One)									
MTCETE204A	Bridge Engineering	3	0	1	50	100	150	4	
MTCETE204B	Transportation Planning	3	0	1	50	100	150	4	
MTCETE204C	Highway Construction	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCETE205	Highway Material Testing Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits
MCETE301	Pavement Management System	3	0	1	50	100	150	4
MCETE302	Urban Transportation Planning II	3	0	1	50	100	150	4
MCETE303	Traffic Flow Theory	3	0	1	50	100	150	4
Electives (Any One)								
MCETE304A	GIS Application in Transportation Engineering	3	0	1	50	100	150	4
MCETE304B	Transportation Facility Design	3	0	1	50	100	150	4
MCETE304C	Intelligent Transport System	3	0	1	50	100	150	4
PRACTICALS/VIVA VOCE								
MTCETE305	Seminar	0	0	0	60	40	100	2
	TOTAL	12	0	4	260	440	700	18

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			Credits
Code	Subject/Paper	L	T	P	IA	EA	Total	
MTCETE401	Dissertation	0	0	0	300	400	700	12
	TOTAL				300	400	700	12

M.Tech. (CE) Course Structure (2016-17) (Structure Engineering)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCESE101	Theory Of Elasticity And Plasticity	3	0	1	50	100	150	4	
MTCESE102	Aseismic Design	3	0	1	50	100	150	4	
MTCESE103	Prestressed Concrete	3	0	1	50	100	150	4	
Electives (Any One)									
MTCESE104A	Statistical and Mathematical Techniques	3	0	1	50	100	150	4	
MTCESE104B	Ground Improvement Techniques	3	0	1	50	100	150	4	
MTCESE104C	Structural Dynamics	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCESE105	Ground Improvement Techniques Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCESE201	Advanced Concrete Design	3	0	1	50	100	150	4	
MTCESE202	Advanced Steel Structures	3	0	1	50	100	150	4	
MTCESE203	Design Of Bridges	3	0	1	50	100	150	4	
Electives (Any One)									
MTCESE204A	Maintenance And Rehabilitation Of Structures	3	0	1	50	100	150	4	
MTCESE204B	Advanced Theory Of Concrete Structures	3	0	1	50	100	150	4	
MTCESE204C	Design Of Substructures	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCESE205	Non-destructive testing Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCESE301	Disaster Mitigation And Management	3	0	1	50	100	150	4	
MTCESE302	Construction Techniques And Management	3	0	1	50	100	150	4	
MTCESE303	Advanced Concrete Technology	3	0	1	50	100	150	4	
Electives (Any One)									
MTCESE304A	High Rise Structures	3	0	1	50	100	150	4	
MTCESE304B	Theory Of Plates And Shells	3	0	1	50	100	150	4	
MTCESE304C	Advanced Foundation Engineering	3	0	1	50	100	150	4	
<i>PRACTICALS/VIVA VOCE</i>									
MTCESE305	Seminar	0	0	0	60	40	100	2	
	TOTAL	12	0	4	260	440	700	18	

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			Credits
Code	Subject/Paper	L	T	P	IA	EA	Total		
MTCESE401	Dissertation	0	0	0	300	400	700	12	
	TOTAL				300	400	700	12	



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M. Tech.
(Civil Engineering)
(2017-18)

Program Structure

M.Tech. (CE) Course Structure (2017-18) (ENVIRONMENTAL ENGINEERING)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			
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MTCEEV102	Advanced Water Treatment Technology	3	0	1	50	100	150	4
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MTCEEV104C	Environmental Geo technology	3	0	1	50	100	150	4
PRACTICALS/VIVA VOCE								
MTCEEV105	Advanced Water Treatment Lab	0	2	0	60	40	100	1
TOTAL		12	2	4	260	440	700	17

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits
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MTCEEV202	Industrial Waste Treatment	3	0	1	50	100	150	4
MTCEEV203	Environment Impact Assessment & Auditing	3	0	1	50	100	150	4
Electives (Any One)								
MTCEEV204A	Solid Waste Management	3	0	1	50	100	150	4
MTCEEV204B	Hydrology And Applied Hydraulics	3	0	1	50	100	150	4
MTCEEV204C	Environmental Chemistry & Microbiology	3	0	1	50	100	150	4
PRACTICALS/VIVA VOCE								
MTCEEV205	Industrial Waste Treatment Lab	0	2	0	60	40	100	1
TOTAL		12	2	4	260	440	700	17

M.Tech. (CE), Semester-III II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
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MTCEEV303	Environment & Health	3	0	1	50	100	150	4	
Electives (Any One)									
MTCEEV304A	Ground Water Pollution	3	0	1	50	100	150	4	
MTCEEV304B	Planning And Design Of Environmental Facilities	3	0	1	50	100	150	4	
MTCEEV304C	Indoor Air Quality	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCEEV305	Seminar	0	0	0	60	40	100	2	
	TOTAL	12	0	4	260	440	700	18	

M.Tech. (CE), Semester-IV II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			Credits
Code	Subject/Paper	L	T	P	IA	EA	Total		
MTCEEV401	Dissertation	0	0	0	300	400	700	12	
	TOTAL				300	400	700	12	

M.Tech. (CE) Course Structure (2017-18) (Transportation Engineering)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCETE101	Traffic Engineering-I	3	0	1	50	100	150	4	
MTCETE102	Highway Materials	3	0	1	50	100	150	4	
MTCETE103	Pavement analysis and Design	3	0	1	50	100	150	4	
Electives (Any One)									
MTCETE104A	Statistical and Mathematical Techniques	3	0	1	50	100	150	4	
MTCETE104B	Ground Improvement Techniques	3	0	1	50	100	150	4	
MTCETE104C	Intelligent Transportation system	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCETE105	Ground Improvement Techniques Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCETE201	Traffic Engineering II	3	0	1	50	100	150	4	
MTCETE202	Urban Transportation Planning I	3	0	1	50	100	150	4	
MTCETE203	Highway Geometric Design	3	0	1	50	100	150	4	
Electives (Any One)									
MTCETE204A	Bridge Engineering	3	0	1	50	100	150	4	
MTCETE204B	Transportation Planning	3	0	1	50	100	150	4	
MTCETE204C	Highway Construction	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCETE205	Highway Material Testing Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits
MCETE301	Pavement Management System	3	0	1	50	100	150	4
MCETE302	Urban Transportation Planning II	3	0	1	50	100	150	4
MCETE303	Traffic Flow Theory	3	0	1	50	100	150	4
Electives (Any One)								
MCETE304A	GIS Application in Transportation Engineering	3	0	1	50	100	150	4
MCETE304B	Transportation Facility Design	3	0	1	50	100	150	4
MCETE304C	Intelligent Transport System	3	0	1	50	100	150	4
PRACTICALS/VIVA VOCE								
MTCETE305	Seminar	0	0	0	60	40	100	2
	TOTAL	12	0	4	260	440	700	18

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

THEORY PAPERS					Marks Allocation			Credits
Code	Subject/Paper	L	T	P	IA	EA	Total	
MTCETE401	Dissertation	0	0	0	300	400	700	12
	TOTAL				300	400	700	12

M.Tech. (CE) Course Structure (2017-18) (Structure Engineering)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCESE101	Theory Of Elasticity And Plasticity	3	0	1	50	100	150	4	
MTCESE102	Aseismic Design	3	0	1	50	100	150	4	
MTCESE103	Prestressed Concrete	3	0	1	50	100	150	4	
Electives (Any One)									
MTCESE104A	Statistical and Mathematical Techniques	3	0	1	50	100	150	4	
MTCESE104B	Ground Improvement Techniques	3	0	1	50	100	150	4	
MTCESE104C	Structural Dynamics	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCESE105	Ground Improvement Techniques Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCESE201	Advanced Concrete Design	3	0	1	50	100	150	4	
MTCESE202	Advanced Steel Structures	3	0	1	50	100	150	4	
MTCESE203	Design Of Bridges	3	0	1	50	100	150	4	
Electives (Any One)									
MTCESE204A	Maintenance And Rehabilitation Of Structures	3	0	1	50	100	150	4	
MTCESE204B	Advanced Theory Of Concrete Structures	3	0	1	50	100	150	4	
MTCESE204C	Design Of Substructures	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCESE205	Non-destructive testing Lab	0	2	0	60	40	100	1	
	TOTAL	12	2	4	260	440	700	17	

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			
Code	Subject/Paper	L	P	T	IA	EA	Total	Credits	
MTCESE301	Disaster Mitigation And Management	3	0	1	50	100	150	4	
MTCESE302	Construction Techniques And Management	3	0	1	50	100	150	4	
MTCESE303	Advanced Concrete Technology	3	0	1	50	100	150	4	
Electives (Any One)									
MTCESE304A	High Rise Structures	3	0	1	50	100	150	4	
MTCESE304B	Theory Of Plates And Shells	3	0	1	50	100	150	4	
MTCESE304C	Advanced Foundation Engineering	3	0	1	50	100	150	4	
PRACTICALS/VIVA VOCE									
MTCESE305	Seminar	0	0	0	60	40	100	2	
	TOTAL	12	0	4	260	440	700	18	

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

THEORY PAPERS						Marks Allocation			Credits
Code	Subject/Paper	L	T	P	IA	EA	Total		
MTCESE401	Dissertation	0	0	0	300	400	700	12	
	TOTAL				300	400	700	12	



JAGADGURUKUL
UNIVERSITY

Faculty of Engineering & Technology

M. Tech.
(Civil Engineering)
(2018-19)

Program Structure

M.Tech. (CE) Course Structure (2018-19) (ENVIRONMENTAL ENGINEERING)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

Code	Title of Subject	L	T	P	IA	EA	Total	Credits
MTCEEV101	Energy & Environment	3	0	0	50	100	150	3
MTCEEV102	Advanced Waste Water Treatment Technology	3	0	0	50	100	150	3
Elective -1 (Any One)								
MTCEEV103A	Advanced Water Treatment Technology	3	0	0	50	100	150	3
MTCEEV103B	Statistical and Mathematical Techniques	3	0	0	50	100	150	3
MTCEEV103C	Environmental Geo technology	3	0	0	50	100	150	3
Elective -2 (Any One)								
MTCEEV104A	Noise and Thermal Pollution	3	0	0	50	100	150	3
MTCEEV104B	Environmental Hydraulics	3	0	0	50	100	150	3
MTCEEV104C	Environmental Chemistry & Microbiology	3	0	0	50	100	150	3
MLC & Audit								
MTCEEV105	Research Methodology and IPR	2	0	0	50	100	150	2
	Audit Course – 1							
	AUDIT 1 and 2 : English for Research Paper Writing							
	AUDIT 1 and 2: Disaster Management							
	AUDIT 1 and 2 : Sanskrit For Technical Knowledge							
	AUDIT 1 and 2 : Value Education							
	AUDIT 1 and 2 : Constitution Of India							
	AUDIT 1 and 2 : Pedagogy Studies							
	AUDIT 1 and 2: Stress Management by Yoga							
	AUDIT 1 and 2: Personality Development through Life Enlightenment							
MTCEEV106	Skills	2	0	0	50	100	150	0
Practical/Viva Voce								
MTCEEV107	Advanced Water Treatment Lab	0	0	4	60	40	100	2
MTCEEV108	Sanitation Engineering lab	0	0	4	60	40	100	2
Total		16	0	8	370	580	950	18

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCEEV2 01	Environmental Policies & Legislation	3	0	0	50	10 0	150	3
MTCEEV2 02	Environment Impact Assessment & Auditing	3	0	0	50	10 0	150	3
Eective -1 (Any One)								
MTCEEV2 03A	Solid Waste Management	3	0	0	50	10 0	150	3
MTCEEV2 03B	Hydrology And Applied Hydraulics	3	0	0	50	10 0	150	3
MTCEEV2 03C	Indoor Air Quality	3	0	0	50	10 0	150	3
Eective -2 (Any One)								
MTCEEV2 04A	Industrial Waste Treatment	3	0	0	50	10 0	150	3
MTCEEV2 04B	Hazardous Waste Treatment	3	0	0	50	10 0	150	3
MTCEEV2 04C	Ground Water Pollution	3	0	0	50	10 0	150	3
Audit								
MTCEEV2 05	Audit Course – 2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
Practical/Viva Voce								
MTCEEV2 06	Industrial Waste Treatment Lab	0	0	4	60	40	100	2
MTCEEV2 07	Air quality testing lab	0	0	4	60	40	100	2
MTCEEV2 08	Mini Project with Seminar	2	0	0	60	40	100	2
Total		1 4	0	8	38 0	52 0	900	18

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

Course Number	Audit Course - Stress Management by Yoga	L	T	P	IA	EA	Total	Credits
Elective -1 (Any One)								
MTCEEV301A	Air Pollution & Its Control	3	0	0	50	100	150	3
MTCEEV301B	Environmental Aspects of Industries	3	0	0	50	100	150	3
MTCEEV301C	Environment & Health	3	0	0	50	100	150	3
Elective -2 (Any One)								
MTCEEV302A	Business Analytics	3	0	0	50	100	150	3
MTCEEV302B	Industrial Safety	3	0	0	50	100	150	3
MTCEEV302C	Operations Research	3	0	0	50	100	150	3
MTCEEV302D	Cost Management of Engineering Projects	3	0	0	50	100	150	3
MTCEEV302E	Composite Materials	3	0	0	50	100	150	3
MTCEEV302F	Waste to Energy	3	0	0	50	100	150	3
Practical/Viva Voce								
MTCEEV303	Dissertation-I /Industrial Project	0	0	20	60	40	100	10
Total		6	0	20	160	240	400	16

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCEEV401	Dissertation II	0	0	32	300	400	700	16
Total		0	0	32	300	400	700	16

M.Tech. (CE) Course Structure (2018-19)

(Transportation Engineering)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

Code	Title of Subject	L	T	P	IA	EA	Total	Credits
MTCETE101	Traffic Engineering-I	3	0	0	50	100	150	3
MTCETE102	Highway Materials	3	0	0	50	100	150	3
Elective -1 (Any One)								
MTCETE103A	Pavement analysis and Design	3	0	0	50	100	150	3
MTCETE103B	Statistical and Mathematical Techniques	3	0	0	50	100	150	3
MTCETE103C	Transportation Planning	3	0	0	50	100	150	3
Elective -2 (Any One)								
MTCETE104A	Ground Improvement Techniques	3	0	0	50	100	150	3
MTCETE104B	Intelligent Transportation system	3	0	0	50	100	150	3
MTCETE104C	Pavement Maintenance System	3	0	0	50	100	150	3
MLC & Audit								
MTCETE105	Research Methodology and IPR	2	0	0	50	100	150	2
MTCESE106	Audit Course – 1							
	AUDIT 1 and 2 : English for Research Paper Writing							
	AUDIT 1 and 2: Disaster Management							
	AUDIT 1 and 2 : Sanskrit For Technical Knowledge							
	AUDIT 1 and 2 : Value Education							
	AUDIT 1 and 2 : Constitution Of India							
	AUDIT 1 and 2 : Pedagogy Studies							
	AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	50	100	150	0
Practical/Viva Voce								
MTCETE107	Ground Improvement Techniques Lab	0	0	4	60	40	100	2
MTCETE108	Pavement analysis and Design Lab	0	0	4	60	40	100	2
Total		16	0	8	370	580	950	18

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCETE201	Traffic Engineering II	3	0	0	50	100	150	3
MTCETE202	Urban Transportation Planning	3	0	0	50	100	150	3
Eective -1 (Any One)								
MTCETE203A	Highway Geometric Design	3	0	0	50	100	150	3
MTCETE203B	Highway Construction	3	0	0	50	100	150	3
MTCETE203C	GIS Application in Transportation Engineering	3	0	0	50	100	150	3
Eective -2 (Any One)								
MTCETE204A	Bridge Engineering	3	0	0	50	100	150	3
MTCETE204B	Transportation Facility Design	3	0	0	50	100	150	3
MTCETE204C	Quantitative techniques for transportation engineering	3	0	0	50	100	150	3
Audit								
MTCETE205	Audit Course – 2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
Practical/Viva Voce								
MTCETE206	Highway Material Testing Lab	0	0	4	60	40	100	2
MTCETE207	CAD in Transportation Engineering	0	0	4	60	40	100	2
MTCETE208	Mini Project with Seminar	2	0	0	60	40	100	2
Total		14	0	8	380	520	900	18

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
Elective -1 (Any One)								
MTCETE301A	Pavement Management System	3	0	0	50	100	150	3
MTCETE301B	Mass transit system planning	3	0	0	50	100	150	3
MTCETE301C	Traffic Flow Theory	3	0	0	50	100	150	3
Elective -2 (Any One)								
MTCETE302A	Business Analytics	3	0	0	50	100	150	3
MTCETE302B	Industrial Safety	3	0	0	50	100	150	3
MTCETE302C	Operations Research	3	0	0	50	100	150	3
MTCETE302D	Cost Management of Engineering Projects	3	0	0	50	100	150	3
MTCETE302E	Composite Materials	3	0	0	50	100	150	3
MTCETE302F	Waste to Energy	3	0	0	50	100	150	3
Practical/Viva Voce								
MTCETE303	Dissertation-I /Industrial Project	0	0	20	60	40	100	10
Total		6	0	20	160	240	400	16

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCETE401	Dissertation II	0	0	32	300	400	700	16
Total		0	0	32	300	400	700	16

M.Tech. (CE) Course Structure (2018-19) (Structural Engineering)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

Code	Title of Subject	L	T	P	IA	E A	Tot al	Credi ts
MTCESE10 1	Advanced Structural Analysis	3	0	0	50	10 0	150	3
MTCESE10 2	Advanced Solid Mechanics	3	0	0	50	10 0	150	3
Elective -1 (Any One)								
MTCESE10 3A	Theory of Thin Plates and Shells	3	0	0	50	10 0	150	3
MTCESE10 3B	Theory and Applications of Cement Composites	3	0	0	50	10 0	150	3
MTCESE10 3C	Theory of Structural Stability	3	0	0	50	10 0	150	3
Elective -2 (Any One)								
MTCESE10 4A	Analytical and Numerical Methods for Structural Engineering	3	0	0	50	10 0	150	3
MTCESE10 4B	Structural Health Monitoring	3	0	0	50	10 0	150	3
MTCESE10 4C	Seismic Design of Structures	3	0	0	50	10 0	150	3
MLC & Audit								
MTCESE10 5	Research Methodology and IPR	2	0	0	50	10 0	150	2
Audit Course – 1								
AUDIT 1 and 2 : English for Research Paper Writing								
AUDIT 1 and 2: Disaster Management								
AUDIT 1 and 2 : Sanskrit For Technical Knowledge								
AUDIT 1 and 2 : Value Education								
AUDIT 1 and 2 : Constitution Of India								
AUDIT 1 and 2 : Pedagogy Studies								
AUDIT 1 and 2: Stress Management by Yoga								
AUDIT 1 and 2: Personality Development through Life Enlightenment Skills								
MTCESE10 6		2	0	0	50	10 0	150	0
Practical/Vi va Voce								
MTCESE10 7	Structural Design Lab	0	0	4	60	40	100	2

MTCESE10	Advanced Concrete Lab	0	0	4	60	40	100	2
8		1			37	58		
Total		6	0	8	0	0		18

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCESE201	FEM in Structural Engineering	3	0	0	50	100	150	3
MTCESE202	Structural Dynamics	3	0	0	50	100	150	3
Eective -1 (Any One)								
MTCESE203A	Advanced Steel Design	3	0	0	50	100	150	3
MTCESE203B	Design of Formwork	3	0	0	50	100	150	3
MTCESE203C	Design of High Rise Structures	3	0	0	50	100	150	3
MTCESE203D	Design of Masonry Structures	3	0	0	50	100	150	3
Eective -2 (Any One)								
MTCESE204A	Design of Advanced Concrete Structures	3	0	0	50	100	150	3
MTCESE204B	Advanced Design of Foundations	3	0	0	50	100	150	3
MTCESE204C	Soil Structure Interaction	3	0	0	50	100	150	3
MTCESE204D	Design of Industrial Structure	3	0	0	50	100	150	3
Audit								
MTCESE205	Audit Course – 2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
Practical/Viva Voce								
MTCESE206	Model Testing Lab	0	0	4	60	40	100	2
MTCESE207	Numerical Analysis Lab	0	0	4	60	40	100	2
MTCESE208	Mini Project with Seminar	2	0	0	60	40	100	2
Total		14	0	8	380	520	900	18

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
Elective -1 (Any One)								
MTCESE301A	Design of Prestressed Concrete Structures	3	0	0	50	100	150	3
MTCESE301B	Analysis of Laminated Composite Plates	3	0	0	50	100	150	3
MTCESE301C	Fracture Mechanics of Concrete Structures	3	0	0	50	100	150	3
MTCESE301D	Design of Plates and Shells	3	0	0	50	100	150	3
Elective -2 (Any One)								
MTCESE302A	Business Analytics	3	0	0	50	100	150	3
MTCESE302B	Industrial Safety	3	0	0	50	100	150	3
MTCESE302C	Operations Research	3	0	0	50	100	150	3
MTCESE302D	Cost Management of Engineering Projects	3	0	0	50	100	150	3
MTCESE302E	Composite Materials	3	0	0	50	100	150	3
MTCESE302F	Waste to Energy	3	0	0	50	100	150	3
Practical/Viva Voce								
MTCESE303	Dissertation-I/Industrial Project	0	0	20	60	40	100	10
Total		6	0	20	160	240	400	16

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCESE401	Dissertation II	0	0	32	300	400	700	16
Total		0	0	32	300	400	700	16



JAGADGURUKUL
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Faculty of Engineering & Technology

M. Tech.
(Civil Engineering)
(2019-20)

Program Structure

M.Tech. (CE) Course Structure (2019-20) (ENVIRONMENTAL ENGINEERING)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

Code	Title of Subject	L	T	P	IA	EA	Total	Credits
MTCEEV101	Energy & Environment	3	0	0	50	100	150	3
MTCEEV102	Advanced Waste Water Treatment Technology	3	0	0	50	100	150	3
Elective -1 (Any One)								
MTCEEV103A	Advanced Water Treatment Technology	3	0	0	50	100	150	3
MTCEEV103B	Statistical and Mathematical Techniques	3	0	0	50	100	150	3
MTCEEV103C	Environmental Geo Technology	3	0	0	50	100	150	3
Elective -2 (Any One)								
MTCEEV104A	Noise and Thermal Pollution	3	0	0	50	100	150	3
MTCEEV104B	Environmental Hydraulics	3	0	0	50	100	150	3
MTCEEV104C	Environmental Chemistry & Microbiology	3	0	0	50	100	150	3
MLC & Audit								
MTCEEV105	Research Methodology and IPR	2	0	0	50	100	150	2
	Audit Course – 1							
	AUDIT 1 and 2 : English for Research Paper Writing							
	AUDIT 1 and 2: Disaster Management							
	AUDIT 1 and 2 : Sanskrit For Technical Knowledge							
	AUDIT 1 and 2 : Value Education							
	AUDIT 1 and 2 : Constitution Of India							
	AUDIT 1 and 2 : Pedagogy Studies							
	AUDIT 1 and 2: Stress Management by Yoga							
	AUDIT 1 and 2: Personality Development through Life Enlightenment Skills							
MTCEEV106		2	0	0	50	100	150	0
Practical/Viva Voce								
MTCEEV107	Advanced Water Treatment Lab	0	0	4	60	40	100	2
MTCEEV108	Sanitation Engineering lab	0	0	4	60	40	100	2
Total		16	0	8	370	580	950	18

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCEEV2 01	Environmental Policies & Legislation	3	0	0	50	100	150	3
MTCEEV2 02	Environment Impact Assessment & Auditing	3	0	0	50	100	150	3
Eective -1 (Any One)								
MTCEEV2 03A	Solid Waste Management	3	0	0	50	100	150	3
MTCEEV2 03B	Hydrology And Applied Hydraulics	3	0	0	50	100	150	3
MTCEEV2 03C	Indoor Air Quality	3	0	0	50	100	150	3
Eective -2 (Any One)								
MTCEEV2 04A	Industrial Waste Treatment	3	0	0	50	100	150	3
MTCEEV2 04B	Hazardous Waste Treatment	3	0	0	50	100	150	3
MTCEEV2 04C	Ground Water Pollution	3	0	0	50	100	150	3
Audit								
MTCEEV2 05	Audit Course – 2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
Practical/Viva Voce								
MTCEEV2 06	Industrial Waste Treatment Lab	0	0	4	60	40	100	2
MTCEEV2 07	Air Quality Testing Lab	0	0	4	60	40	100	2
MTCEEV2 08	Mini Project with Seminar	2	0	0	60	40	100	2
Total		14	0	8	380	520	900	18

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

Course Number	Audit Course - Stress Management by Yoga	L	T	P	IA	EA	Total	Credits
Elective -1 (Any One)								
MTCEEV301A	Air Pollution & Its Control	3	0	0	50	100	150	3
MTCEEV301B	Environmental Aspects of Industries	3	0	0	50	100	150	3
MTCEEV301C	Environment & Health	3	0	0	50	100	150	3
Elective -2 (Any One)								
MTCEEV302A	Business Analytics	3	0	0	50	100	150	3
MTCEEV302B	Industrial Safety	3	0	0	50	100	150	3
MTCEEV302C	Operations Research	3	0	0	50	100	150	3
MTCEEV302D	Cost Management of Engineering Projects	3	0	0	50	100	150	3
MTCEEV302E	Composite Materials	3	0	0	50	100	150	3
MTCEEV302F	Waste to Energy	3	0	0	50	100	150	3
Practical/Viva Voce								
MTCEEV303	Dissertation-I /Industrial Project	0	0	20	60	40	100	10
Total		6	0	20	160	240	400	16

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCEEV401	Dissertation-II	0	0	32	300	400	700	16
Total		0	0	32	300	400	700	16

M.Tech. (CE) Course Structure (2019-20) (Transportation Engineering)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

Code	Title of Subject	L	T	P	IA	EA	Total	Credits
MTCETE101	Traffic Engineering-I	3	0	0	50	100	150	3
MTCETE102	Highway Materials	3	0	0	50	100	150	3
Elective -1 (Any One)								
MTCETE103A	Pavement analysis and Design	3	0	0	50	100	150	3
MTCETE103B	Statistical and Mathematical Techniques	3	0	0	50	100	150	3
MTCETE103C	Transportation Planning	3	0	0	50	100	150	3
Elective -2 (Any One)								
MTCETE104A	Ground Improvement Techniques	3	0	0	50	100	150	3
MTCETE104B	Intelligent Transportation system	3	0	0	50	100	150	3
MTCETE104C	Pavement Maintenance System	3	0	0	50	100	150	3
MLC & Audit								
MTCETE105	Research Methodology and IPR	2	0	0	50	100	150	2
MTCETE106	Audit Course – 1							
	AUDIT 1 and 2 : English for Research Paper Writing							
	AUDIT 1 and 2: Disaster Management							
	AUDIT 1 and 2 : Sanskrit For Technical Knowledge							
	AUDIT 1 and 2 : Value Education							
	AUDIT 1 and 2 : Constitution Of India							
	AUDIT 1 and 2 : Pedagogy Studies							
	AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	50	100	150	0
Practical/Viva Voce								
MTCETE107	Ground Improvement Techniques Lab	0	0	4	60	40	100	2
MTCETE108	Pavement analysis and Design Lab	0	0	4	60	40	100	2
Total		16	0	8	370	580	950	18

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCETE201	Traffic Engineering II	3	0	0	50	100	150	3
MTCETE202	Urban Transportation Planning	3	0	0	50	100	150	3
Eective -1 (Any One)								
MTCETE203A	Highway Geometric Design	3	0	0	50	100	150	3
MTCETE203B	Highway Construction	3	0	0	50	100	150	3
MTCETE203C	GIS Application in Transportation Engineering	3	0	0	50	100	150	3
Eective -2 (Any One)								
MTCETE204A	Bridge Engineering	3	0	0	50	100	150	3
MTCETE204B	Transportation Facility Design	3	0	0	50	100	150	3
MTCETE204C	Quantitative techniques for transportation engineering	3	0	0	50	100	150	3
Audit								
MTCETE205	Audit Course – 2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
Practical/Viva Voce								
MTCETE206	Highway Material Testing Lab	0	0	4	60	40	100	2
MTCETE207	CAD in Transportation Engineering	0	0	4	60	40	100	2
MTCETE208	Mini Project with Seminar	2	0	0	60	40	100	2
Total		14	0	8	380	520	900	18

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
Elective -1 (Any One)								
MTCETE301A	Pavement Management System	3	0	0	50	100	150	3
MTCETE301B	Mass transit system planning	3	0	0	50	100	150	3
MTCETE301C	Traffic Flow Theory	3	0	0	50	100	150	3
Elective -2 (Any One)								
MTCETE302A	Business Analytics	3	0	0	50	100	150	3
MTCETE302B	Industrial Safety	3	0	0	50	100	150	3
MTCETE302C	Operations Research	3	0	0	50	100	150	3
MTCETE302D	Cost Management of Engineering Projects	3	0	0	50	100	150	3
MTCETE302E	Composite Materials	3	0	0	50	100	150	3
MTCETE302F	Waste to Energy	3	0	0	50	100	150	3
Practical/Viva Voce								
MTCETE303	Dissertation-I /Industrial Project	0	0	20	60	40	100	10
Total		6	0	20	160	240	400	16

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCETE401	Dissertation II	0	0	32	300	400	700	16
Total		0	0	32	300	400	700	16

M.Tech. (CE) Course Structure (2019-20) (Structural Engineering)

M.Tech. (CE), Semester-I, I yr. (2 yrs Degree Course)

Code	Title of Subject	L	T	P	IA	E A	Tot al	Credi ts
MTCESE10 1	Advanced Structural Analysis	3	0	0	50	10 0	150	3
MTCESE10 2	Advanced Solid Mechanics	3	0	0	50	10 0	150	3
Elective -1 (Any One)								
MTCESE10 3A	Theory of Thin Plates and Shells	3	0	0	50	10 0	150	3
MTCESE10 3B	Theory and Applications of Cement Composites	3	0	0	50	10 0	150	3
MTCESE10 3C	Theory of Structural Stability	3	0	0	50	10 0	150	3
Elective -2 (Any One)								
MTCESE10 4A	Analytical and Numerical Methods for Structural Engineering	3	0	0	50	10 0	150	3
MTCESE10 4B	Structural Health Monitoring	3	0	0	50	10 0	150	3
MTCESE10 4C	Seismic Design of Structures	3	0	0	50	10 0	150	3
MLC & Audit								
MTCESE10 5	Research Methodology and IPR	2	0	0	50	10 0	150	2
Audit Course – 1 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills								
MTCESE10 6		2	0	0	50	10 0	150	0
Practical/Vi va Voce								
MTCESE10 7	Structural Design Lab	0	0	4	60	40	100	2

MTCESE10	Advanced Concrete Lab	0	0	4	60	40	100	2
8		1			37	58		
Total		6	0	8	0	0		18

M.Tech. (CE), Semester-II, I yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCESE201	FEM in Structural Engineering	3	0	0	50	100	150	3
MTCESE202	Structural Dynamics	3	0	0	50	100	150	3
Eective -1 (Any One)								
MTCESE203A	Advanced Steel Design	3	0	0	50	100	150	3
MTCESE203B	Design of Formwork	3	0	0	50	100	150	3
MTCESE203C	Design of High Rise Structures	3	0	0	50	100	150	3
MTCESE203D	Design of Masonry Structures	3	0	0	50	100	150	3
Eective -2 (Any One)								
MTCESE204A	Design of Advanced Concrete Structures	3	0	0	50	100	150	3
MTCESE204B	Advanced Design of Foundations	3	0	0	50	100	150	3
MTCESE204C	Soil Structure Interaction	3	0	0	50	100	150	3
MTCESE204D	Design of Industrial Structure	3	0	0	50	100	150	3
Audit								
MTCESE205	Audit Course – 2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
Practical/Viva Voce								
MTCESE206	Model Testing Lab	0	0	4	60	40	100	2
MTCESE207	Numerical Analysis Lab	0	0	4	60	40	100	2
MTCESE208	Mini Project with Seminar	2	0	0	60	40	100	2
Total		14	0	8	380	520	900	18

M.Tech. (CE), Semester-III, II yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
Elective -1 (Any One)								
MTCESE301A	Design of Prestressed Concrete Structures	3	0	0	50	100	150	3
MTCESE301B	Analysis of Laminated Composite Plates	3	0	0	50	100	150	3
MTCESE301C	Fracture Mechanics of Concrete Structures	3	0	0	50	100	150	3
MTCESE301 D	Design of Plates and Shells							
Elective -2 (Any One)								
MTCESE302A	Business Analytics	3	0	0	50	100	150	3
MTCESE302B	Industrial Safety	3	0	0	50	100	150	3
MTCESE302C	Operations Research	3	0	0	50	100	150	3
MTCESE302D	Cost Management of Engineering Projects	3	0	0	50	100	150	3
MTCESE302E	Composite Materials	3	0	0	50	100	150	3
MTCESE302F	Waste to Energy	3	0	0	50	100	150	3
Practical/Viva Voce								
MTCESE303	Dissertation-I /Industrial Project	0	0	20	60	40	100	10
Total		6	0	20	160	240	400	16

M.Tech. (CE), Semester-IV, II yr. (2 yrs Degree Course)

Course Number	Subject	L	T	P	IA	EA	Total	Credits
MTCESE401	Dissertation II	0	0	32	300	400	700	16
Total		0	0	32	300	400	700	16