

**CENTRE FOR TRANSPORTATION SYSTEMS (CTRANS)  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **49**    **M.Tech.(Infrastructure Systems)**  
 Department: **TS**    **Centre for Transportation Systems (CTRANS)**  
 Year: **I**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
<b>Semester- I (Autumn)</b>														
1.	CTN-501	Quantitative Techniques for Infrastructure Systems	PCC	4	3	0	2	3	-	15	25	20	40	-
2.	CTN-502	Infrastructure Planning and Management	PCC	4	3	1	0	3	-	25	-	25	50	-
3.	CTN-503	Public Private Partnership in Transport Infrastructure	PCC	4	3	1	0	3	-	25	-	25	50	-
4.	CTN-504	Barrier Free Environment for Transport Infrastructure	PCC	4	3	0	2	3	-	15	25	20	40	-
5.		Programme Elective – I	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		20	12	2	4							
<b>Semester-II (Spring)</b>														
1.	CTN-505	Project Management and Implementation	PCC	4	3	1	0	3	-	25	-	25	50	-
2.	CTN-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	100	-
3.		Programme Elective – II	PEC	4	-	-	-	-	-	-	-	-	-	-
4.		Programme Elective – III	PEC	4	-	-	-	-	-	-	-	-	-	-
5.		Programme Elective – IV	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		18	3	1	0							

**CENTRE FOR TRANSPORTATION SYSTEMS (CTRANS)  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **49**    **M.Tech.(Infrastructure Systems)**  
 Department: **TS**    **Centre for Transportation Systems (CTRANS)**  
 Year: **II**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
<b>Semester- I (Autumn)</b>														
1.	CTN-701A	Dissertation Stage-I (to be continued next semester)	DIS	12	-	-	-	-	-	-	-	-	100	-
		Total		12										
<b>Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.</b>														
<b>Semester-II (Spring)</b>														
1.	CTN-701B	Dissertation Stage-II (contd. From III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										

<b>Summary</b>				
Semester	1	2	3	4
<b>Semester-wise Total Credits</b>	<b>20</b>	<b>18</b>	<b>12</b>	<b>18</b>
<b>Total Credits</b>	<b>68</b>			

**Program Elective Courses (Infrastructure Systems)**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1.	CTN-611	Management of Transport Systems	PEC	4	3	0	2	3	-	15	25	20	40	-
2.	CTN-612	Sustainable Transportation Systems	PEC	4	3	1	0	3	-	25	-	25	50	-
3.	CTN-613	Infrastructure Asset Management	PEC	4	3	1	0	3	-	25	-	25	50	-
4.	CTN-614	Transportation Safety	PEC	4	3	1	0	3	-	25	-	25	50	-
5.	CTN-615	Inland Navigation and Water Transport	PEC	4	3	1	0	3	-	25	-	25	50	-
6.	CTN-616	Geographic Information System (GIS) Applications in Transport System	PEC	4	3	0	2	3	-	15	25	20	40	-
7.	CTN-617	Utility Mapping for Transport Infrastructure	PEC	4	3	0	2	3	-	15	25	20	40	-
8.	CTN-618	Intelligent Transportation System	PEC	4	3	1	0	3	-	25	-	25	50	-
9.	CTN-619	Biofuel for Automobiles	PEC	4	3	1	0	3	-	25	-	25	50	-
10.	CTN-620	Dynamics of Rail & Road Vehicles	PEC	4	3	1	0	3	-	25	-	25	50	-
11.	CTN-621	Pipeline Transport System	PEC	4	3	1	0	3	-	25	-	25	50	-
12.	CTN-622	Railway Infrastructure	PEC	4	3	1	0	3	-	25	-	25	50	-
13.	CTN-623	Airport Infrastructure	PEC	4	3	1	0	3	-	25	-	25	50	-
14.	CTN-624	Applied Transport Economics	PEC	4	3	1	0	3	-	25	-	25	50	-
15.	MIN-585	Supply Chain Management	PEC	4	3	1	0	3	-	25	-	25	50	-
16.	CEN-614	Theory and Applications of GIS	PEC	4	3	-	2	3	-	15	25	20	40	-
17.	CEN-513	Remote Sensing and Image Processing	PEC	4	3	-	2	3	-	15	25	20	40	-
18.	CEN-663	Pavement Evaluation and Management	PEC	4	3	1	-	3	-	25	-	25	50	-

**Department of Civil Engineering  
Indian Institute of Technology Roorkee**

No. IITR/CED/CTRANS/

Dated: April 10, 2014


**Head, CTRANS**

**Ref:** No. IITR/CTRANS/MTECH/1812014 Dated March 18, 2014

**Sub:** Including three courses from the M.Tech Programs of Civil Engg. Deptt. in the CTRANS M.Tech Program on “Infrastructure Systems”.

With reference to the above letter, the following three courses can be included as Program Electives in the CTRANS M.Tech Program on “Infrastructure Systems”.

1. Theory and Applications of GIS (CE-614)
2. Remote Sensing and Image Processing (CE-513)
3. Pavement Evaluation and Management (CE-663)

  
**(Pradeep Kumar)**  
**Chairman, DAC**