

# INSTITUTE OF INFRASTRUCTURE TECHNOLOGY RESEARCH AND MANAGEMENT (IITRAM)

## Suggested Course Structure

M.Tech. at IITRAM is a four semester two years programme. The maximum duration of program is 3 years. The general course structure for M.Tech. Program is shown in Table 1. It consists of three categories of courses. The first category consists of compulsory institute level courses. The second category comprises of core courses that includes mandatory courses in chosen specialization. The third category includes elective courses and is designed to offer flexibility to suit research requirements and changing industry demand from time to time. Laboratory courses, field visits, practical trainings, projects, seminars etc. that may constitute part of core and/or elective courses enhance the learning experience.

**Table 1: General Structure for M.Tech. Programme at IITRAM**

Semester-I	Optimization Methods in Engineering(2 credits)	Core Courses (3)	Elective Course (1)
Semester-II	Research Methodology (2 credits)	Core Courses (2-3)	Elective Courses (1-2)
Semester-III	Elective Course (0-2) / Mini Project	Masters Thesis	
Semester -IV	Masters Thesis		

### Credit Structure #

- Minimum credits for a Masters degree at IITRAM are fixed at 60. For specific programs, individual department can opt for a higher credit hours.
- The minimum number of credits that a student must register for in any given semester (excluding summer semester if any) shall not be less than 12. The maximum number of credits that student can register for in any given semester shall not be greater than 20.
- A student should maintain a minimum SPI of 5.5 and a minimum CPI of 6.0 at the end of each semester and should get a satisfactory appraisal in projects/reading courses/ thesis.

## Civil Engineering #

### Course Structure#

The program is designed as a 60 credit course program with 60 % weightage for course work and 40% weightage for thesis work.

<b>Semester-I (Credits: 16)</b>		
<b>Sr.No.</b>	<b>Name of the course</b>	<b>Credits</b>
1	Optimization Methods in Engineering	2-0-0-2
2	Transportation Systems Management	3-0-2-4
3	Municipal Waste Management	3-0-2-4
4	Ground Improvement Techniques	3-0-0-3
5	Elective-I	3-0-0-3
<b>Semester-II (Credits: 16)</b>		
1	Research Methodology	2-0-0-2
2	Water Resources Planning and Management	3-0-2-4
3	Public Infrastructure-Planning and Design	3-0-2-4
4	Elective-II	3-0-0-3
5	Elective-III	3-0-0-3
<b>Semester-III (Credits: 12)</b>		
1	M.Tech Thesis	0-0-0-8
2	Elective-IV	3-0-0-3
3	Seminar / Mini project	0-0-2-1
<b>Semester-IV (Credits: 16)</b>		
1	M.Tech Thesis	0-0-0-16

### Tentative List of Electives

1. Advanced Construction Practices
2. Advanced Foundation Systems
3. Air Quality and Control
4. Disaster Management
5. Infrastructure Design
6. Microeconomics of Infrastructure
7. Pavement Construction and Maintenance
8. Reinforced Earth Structures
9. Structural Health Monitoring
10. Urban Planning