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 c redits 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.

Electrical Engineering

Proposed Curriculum:

The proposed curriculum is as follows:

Sr.No.	Name of the course	Credits
SemesterI (15 Credits)		
1	Optimization Methods	2-0-0-2
2	Linear Algebra	3-0-0-3
3	Renewable Energy Infrastructure	3-0-0-3
4	Communication Infrastructure	3-0-2-4
5	Elective-I	3-0-0-3
Semester-II (15 Credits)		
1	Power Transmission Infrastructure	3-0-0-3
2	Adaptive and Nonlinear Control	3-0-2-4
3	Elective-II	3-0-0-3
4	Artificial Intelligence	3-0-0-3
5	Research Methodology	2-0-0-2
Semester-III (14 Credits)		
1	M.Tech Thesis	0-0-0-11
2	Elective III	3-0-0-3
Semester- IV (16 Credits)		
1	M.Tech Thesis	0-0-0-16

Tentative List of Electives: The following courses would be offered in various semesters.

• Smart Grid	• Antenna Design and Analysis
• Machine Learning	• Biomedical instrumentation
• Artificial Intelligence	• Chaos and Bifurcation
• Telecommunication Infrastructure	• Microwave Integrated Circuits
• Advanced Power Electronics	• Multi-rate Signal processing
• Digital Control	• Remote Sensing and Satellite Communication
• Robust Control	• Speech Processing
• Advanced Electrical Drives	• VLSI and Embedded Systems

 # subject to approval