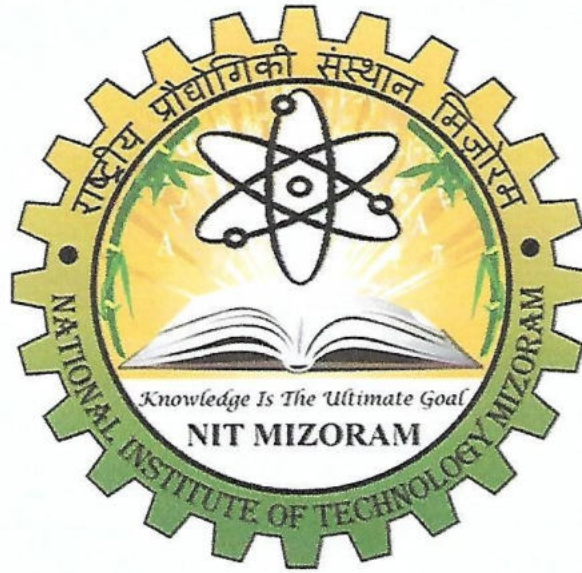


राष्ट्रीय प्रौद्योगिकी संस्थान मिजोरम
NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM
(An Institute of National Importance under Ministry of Education, Govt. of India)
Chaltlang, Aizawl, Mizoram – 796012



**Course Structure & Syllabus for M. Tech Programme in
Structural Engineering
BATCH: 2023-2024 onwards**

DEPARTMENT OF CIVIL ENGINEERING

B. Mishra

Chhina

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Amit Shaw
(Amit Shaw)

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M.Tech Programme in Structural Engineering: Course Structure & Syllabus

Classification of Credits Points:

1 Hr Lecture (L) per week	1 Hr Tutorial (T) per week	1 Hr Laboratory (P) per week
2 credits	2 credits	1 credit

Semester 1			
Course Code	Course Name	L-T-P	Credits
CEL 2101	Structural Dynamics	3-0-0	6
CEL 2102	Bridge Engineering	3-0-0	6
CEL 2103	Advanced Reinforced Concrete Design	3-0-0	6
CEL 2104	Continuum Mechanics	3-0-0	6
CEL 21XX	Elective 1	3-0-0	6
CEP 2101	Structural Engineering Laboratory	0-0-3	3
CEP 2102	Seminar 1	0-0-2	2
Total Credits			35

Semester 2			
Course Code	Course Name	L-T-P	Credits
CEL 2201	Finite Element Methods	3-0-0	6
CEL 2202	Design of Earthquake Resistant Structures	3-0-0	6
CEL 2203	Advanced Concrete Technology	3-1-0	8
CEL 22XX	Elective 2	3-0-0	6
CEL 22XX	Elective 3	3-0-0	6
CEP 2201	Computer Modelling and Simulation of Structures	0-0-3	3
CEP 2202	Seminar 2	0-0-2	2
Total Credits			37

Semester 3			
Course Code	Course Name	L-T-P	Credits
CEP 2301	MTP 1	0-0-16	16
Total Credits			16

Semester 4			
Course Code	Course Name	L-T-P	Credits
CEP 2401	MTP 2	0-0-24	24
Total Credits			24

SEMESTER WISE CREDIT POINT(s)

Semester	1	2	3	4	Total
Credit	35	37	16	24	112

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LIST OF ELECTIVES

SI No.	Course Code	Course Name
Electives 1		
1	CEL 2105	Theory of Stability of Structures
2	CEL 2106	Numerical Methods in Structural Engineering
3	CEL 2107	Sustainable Engineering
4	CEL 2108	High Rise Structures
5	CEL 2109	Analysis and Design of Plates and Shells
6	CEL 2110	Random Vibration
Electives 2		
1	CEL 2204	Structural Health Monitoring and Control
2	CEL 2205	Design of Masonry Structures
3	CEL 2206	Performance-Based Seismic Design of Structures
4	CEL 2207	Fracture Mechanics
5	CEL 2208	Theory of Plasticity
6	CEL 2209	Non-Linear Analysis of Structures
Electives 3		
1	CEL 2210	Optimization Techniques
2	CEL 2211	Condition Assessment and Retrofitting of Structures
3	CEL 2212	Design of Pre-Stressed Concrete Structures
4	CEL 2213	Advanced Steel Design and Composite Structures
5	CEL 2214	Risk and Reliability Analysis of Structural Systems
6	CEL 2215	Fluid-Structure Interaction

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Amit Shaw

(Amit Shaw)

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