

## CURRICULUM STRUCTURE

### M.Tech. (Earthquake Engineering) Effective from 2025–26

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#### *I Semester*

Course Code	Course Title	Credits	Periods/Week (L–T–P)	Marks (IA – UE)	Remarks
MEQ-101	Advanced Structural Analysis	4	3–1–0	40 – 60	Core Course
MEQ-102	Structural Dynamics	4	3–1–0	40 – 60	Core Course
MEQ-103	Finite Element Method	4	3–1–0	40 – 60	Core Course
MEQ-104	Design of Prestressed Concrete Structures	4	3–1–0	40 – 60	Core Course
MEQ-105	Computational Methods and Software Applications	4	3–1–0	40 – 60	Core Course
MEQ-110	Structural Dynamics Lab	2	0–0–4	30 – 20	Core Course

**Total Credits (Semester I): 22**

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#### *II Semester*

Course Code	Course Title	Credits	Periods/Week (L–T–P)	Marks (IA – UE)	Remarks
MEQ-201	Advanced Design of Steel Structures	4	3–1–0	40 – 60	Core Course
MEQ-202	Design of Tall Buildings	4	3–1–0	40 – 60	Core Course
MEQ-203	Reliability-Based Design	4	3–1–0	40 – 60	Core Course
MEQ-204	Advanced Foundation Design	4	3–1–0	40 – 60	Core Course
--	Elective I	4	3–1–0	40 – 60	Elective
MEQ-210	Advanced Software Lab	2	0–0–4	30 – 20	Core Course
MEQ-220	Seminar	2	0–1–2	30 – 20	Core Course

**Total Credits (Semester II): 24**

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**III Semester**

Course Code	Course Title	Credits	Periods/Week (L–T–P)	Marks (IA – UE)	Remarks
MEQ-301	Advanced RCC Design	4	3–1–0	40 – 60	Core Course
--	Elective II	4	3–1–0	40 – 60	Elective
MEQ - 350	Minor Project	6	0–3–6	90 – 60	Core Course

**Total Credits (Semester III): 14**

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**IV Semester**

Course Code	Course Title	Credits	Periods/Week (L–T–P)	Marks (IA – UE)	Remarks
MEQ - 450	Dissertation	12	0–6–12	180 – 120	Core Course

**Total Credits (Semester IV): 12**

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**Credit Summary**

Semester	Core Courses / Electives	Lab / Seminar / Project	Total Credits
I Semester	20	2	22
II Semester	20	4	24
III Semester	8	6	14
IV Semester	0	12	12
<b>Total</b>			<b>72</b>

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**List of Elective Courses**

Elective I (II Semester)		Elective II (III Semester)	
MEQ - 211	Structural Optimization	MEQ - 311	Earthquake Resistant Design
MEQ - 212	Fundamentals of Earthquake Analysis	MEQ - 312	Design of Offshore Structures
MEQ - 213	Disaster Mitigation and Management	MEQ - 313	Wind Resistant Design of Structures
MEQ - 214	Advanced Civil Engineering Materials	MEQ - 314	Advanced Building Construction and Management
MEQ - 215	Strengthening and Retrofitting of Structures	MEQ - 315	Bridge Engineering
MEQ - 216	Theory of Plates and Shells	MEQ - 316	Advanced Solid Mechanics
MEQ - 217	Structural Optimization	MEQ - 317	Theory of Elasticity and Plasticity

**Note:**

As per the new SWAYAM policy of **Jamia Millia Islamia**, it is **mandatory** for all students to complete the **minimum credit requirement** through courses offered on the **SWAYAM online platform**.