Course Structure for M. Tech. (2 years), M. Tech. + Ph.D. Dual Degree in Structural Engineering (to be started in 2023-24)

Minimum Educational Qualification (MEQ): Four-year Bachelor's degree or five-year integrated degree (with first division as defined by the awarding Institute/University for Indian applicants and equivalent to international applicants, as assessed by the Institute) in Civil Engineering. *Relaxation of 5% in the qualifying degree is applicable for SC, ST and PwD category applicants.*

Qualifying Examination (QE):

(a) **International Students:** Valid score of TOEFL or IELTS, AND valid score of GRE
(b) **Indian Students:** Valid GATE qualification in Civil Engineering.

Categories of Admission:

International Students: (i) International self-financed (ISF) students; (ii) International students sponsored by non-government organizations or by a reputed industry (ISW); (iii) International students sponsored by a foreign government or its organizations or through mutual collaborative programs of India with other countries **(GSW)**

Indian Students: Teaching Assistantship (TA); (ii) Highly motivated sponsored candidate (SW) on full-time basis from highly reputed R & D organizations such as DRDO, ISRO, BHEL, C-DAC, ADE, ADA, etc. and highly reputed Industries; (iii) Defense Forces (DF): Candidates sponsored by the Defense Forces; (iv) Regular institute staff (IS) of IIT Indore on part-time basis only.

Candidates of SW, DF and IS categories will not be provided any scholarship.

Duration of Program: 2 years on full-time basis.

Annual Intake: 5 TA and no upper cap on the Non-TA students

Degree Structure	**Total credits requirements**:	72
	a) Core courses:	31
	b) Electives:	05
	c) Dissertation	36

Course Structure for two-year Full-time M. Tech. (Structural Engineering) Program

1st Year: Semester-I

Course code	Course Title	Contact Hours (L-T-P)	Credits
CE 464/ CE 664*	Advanced Solid Mechanics	2-1-0	3
CE XXX	Mechanics of Composite Materials and Structures	2-1-0	3
CE XXX	Design of Steel Concrete Composite Structures	2-1-0	3
CE XXX	Condition Monitoring and Reliability Assessment	2-1-0	3
CE XXX	Analysis and Design of Tall Buildings	2-1-0	3
CE XXX	Field Engineering Lab	0-0-4	2
Total minimum credits earned during the semester			**17**
Additional course (as per the requirement basis)			
HS 641	English Communication Skills	2-0-2	PP/NP

1st Year: Semester-II

Course code	Course Title	Contact Hours (L-T-P)	Credits
CE 684	Advanced Concrete Technology	2-1-0	3
CE XXX	Prestressed Concrete Design	2-1-0	3
CE XXX	Finite Element Applications in Structural Engineering	2-1-0	3
CE XXX	Structural Dynamics and Earthquake Engineering	2-1-0	3
CE XXX	PG Seminar Course	0-0-4	2
CE XXX	Elective-I	0-0-4	2
ZZ XXX	Elective-II	2-1-0	3
Total minimum credits earned during the semester			**19**

2nd Year: Semester-III

Course code	Course Title	Contact Hours (L-T-P)	Credits
CE 799	M. Tech. Research Project (Stage–I)	0-0-36	18
Total minimum credits earned during the semester			**18**

2nd Year: Semester-IV

Course code	Course Title	Contact Hours (L-T-P)	Credits
CE 800	M. Tech. Research Project (Stage–II)	0-0-36	18
Total minimum credits earned during the semester			18
Total minimum credits to be earned during the program			72

Elective-I

Course code	Course Title	Contact Hours (L-T-P)	Credits
CE XXX	Computation Lab	0-0-4	02
CE XXX	Concrete Technology Lab	0-0-4	02
CE XXX	Structural Engineering Lab	0-0-4	02

Elective -II

Course code	Course Title	Contact Hours (L-T-P)	Credits
CE XXX	Plates and Shells	2-1-0	03
CE 410/ CE 610*	Offshore Engineering	2-1-0	03
CE 612/ CE 412	Sustainable Construction	2-1-0	03
CE 432/ CE 632*	Plastic Analysis and Design	2-1-0	03
CE XXX	Elastic Stability	2-1-0	03
CE XXX*	Construction Management	2-1-0	03
CE XXX*	Foundation Engineering	2-1-0	03

*Existing courses to be cross-listed

Note: In addition to the elective courses, students may also opt for PG courses offered by the other Departments at IIT Indore**.**

NOTE: 1. Request for conversion from M.Tech. to M.Tech. + Ph.D. dual degree will be considered after evaluating the research potential of the promising and motivated PG students at the end of the third semester of their program.

2. If the student opts for the Dual Degree Program but cannot complete the requirements of a Ph.D., an exit option with the M.Tech. Degree can be earned at the end of the final semester of the normal M.Tech. Program by getting the M.Tech. Research project examined in the standard manner as per the requirements for the award of an M.Tech. degree.