



JSPM UNIVERSITY PUNE

Recognized by UGC u/s 2 (f) of UGC Act 1956 and enacted by the
State Government of Maharashtra - JSPM University Act, 2022 (Mah.IV of 2023)

JSPM University Pune
Faculty of Science and Technology
School of Civil and Environmental Science



NEP aligned Curriculum Structure

For

M.Tech (Structural Engineering)

(Effective from AY: 2023-24)



JSPM University Pune

FACULTY OF SCIENCE & TECHNOLOGY

SCHOOL OF CIVIL AND ENVIRONMENTAL SCIENCES

FIRST YEAR MASTER OF TECHNOLOGY
(STRUCTURAL ENGINEERING)

COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2023-2024

RELEASE DATE

01/07/2023

REVISION NO.

0.0 (NEP)

SEMESTER I (LEVEL 6.5)

TYPE	CODE	COURSE NAME	TEACHING SCHEME				EXAMINATION SCHEME AND MARKS									TOTAL	CREDITS
			Hours / Week				THEORY (Equal Weightage for CIE and ESE)			PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)					
			L	T	P	EL	CONTINUOUS INSEMESTER EVALUATION (100 Marks)			END SEMESTER EXAMINATION (100 / 50 Marks)	CONTINUOUS INSEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)	CONTINUOUS INSEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)			
							T1 (30 Marks)	T2 (30 Marks)	Assignments (40 Marks)								
PSMC	230GMAM02_01	Advanced Numerical Methods	2	1	-	-	30	30	40	100	-	-	-	-	100	3	
PSBC	230GSEM01_01	Advanced Analysis of Structures	2	-	-	-	30	30	40	100	-	-	-	-	100	2	
PCC	230GSEM02_01	Structural Dynamics	2	-	-	-	30	30	40	100	-	-	-	-	100	2	
PCC	230GSEM03_01	Advanced Design of Reinforced Concrete Structures	3	-	-	2	30	30	40	100	-	-	-	-	100	2	
MMC	-	Multidisciplinary Minor Course-I	1	-	2	-	-	-	-	-	-	-	-	-	100	3.5	
SEC	230GSEM19_01	Building Information Modelling	2	-	2	-	-	-	-	-	50	50	50	50	100	2	
VSC (HSMC)	230IDCB01_01	Design Thinking and Creativity	1	-	-	2	-	-	-	-	50	50	50	50	100	3	
AEC (HSMC)	230UENM01_01	Communicative English for Professionals	1	-	2	-	30	30	40	50	-	-	50	50	50	1.5	
RMC	230IRMM01_01	Research Methodology	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
LC	230GSEM23_01	Structural Engineering Lab	-	-	2	-	-	-	-	-	-	-	-	-	50	2	
TOTAL			16	1	8	4				-	50	50	-	-	50	1	
															800	22	



L-Lecture
Format No.: JSPMUni/ACAD/001

T-Tutorial
Rev. No.:0.0

P-Practical Session (Laboratory)
Rev. Date:01/07/2023

EL-Experiential Learning
Page 1 of 2

Sem	Multidisciplinary Minor Course (MMC)	
I (MMC - I)	Course Code	230GRAM24_01
	Course Name	Sensors and Automation
II (MMC - II)	Course Code	230GETM16_02
	Course Name	IoT Basics and Applications

Dr. Pritam Hait
Programme Coordinator, MTech-STR

Dr. M. Nithya
Director, School of Civil and Environmental Sciences

Dr. R. S. Deshpande
Dean, Faculty of Science and Technology

Dr. Anuradha S. Deshpande
Associate Dean (Academics)



Prof. B.B. Ahuja
Vice Chancellor, JSPM University Pune



JSPM University Pune

FACULTY OF SCIENCE & TECHNOLOGY

SCHOOL OF CIVIL AND ENVIRONMENTAL SCIENCES

FIRST YEAR MASTER OF TECHNOLOGY
(STRUCTURAL ENGINEERING)

COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2023-2024

RELEASE DATE

01/07/2023

REVISION NO.

0.0 (NEP)

SEMESTER II

TYPE	CODE	COURSE NAME	TEACHING SCHEME				EXAMINATION SCHEME AND MARKS									TOTAL	CREDITS
			Hours / Week				THEORY (Equal Weightage for CIE and ESE)			PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)					
			L	T	P	EL	CONTINUOUS INSEMESTER EVALUATION (100 Marks)			END SEMESTER EXAMINATION (100 / 50 Marks)	CONTINUOUS INSEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)	CONTINUOUS INSEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)			
							T1 (30 Marks)	T2 (30 Marks)	Assignments (40 Marks)								
PCC	230GSEM05_02	Finite Element Methods	2	1	-	-	30	30	40	100	-	-	-	-	100	3	
PCC	230GSEM06_02	Earthquake Resistant Design of Structures	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
PCC	230GSEM07_02	Prestressed Concrete Structures	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
MMC	-	Multidisciplinary Minor Course-II	1	-	2	-	-	-	-	-	50	50	50	50	100	2	
SEC	230GSEM20_02	MATLAB for Engineers	2	-	2	-	-	-	-	-	50	50	50	50	100	3	
VSC (HSMC)	230IINB02_02	Innovation	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5	
AEC (HSMC)	230UENM02_02	Business Communication	1	-	2	-	30	30	40	50	-	-	-	-	50	2	
RMC	230IRMM02_02	Research Design and Techniques	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
LC	230GSEM24_02	Structural Analysis lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
IITP/FP/CEP	230GSEM25_02	Internship / Field Project / Community Engagement Programme	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2
TOTAL			14	1	8	4										750	22



Note: A Postgraduate Diploma will be awarded if a student exits after first year.
 For Exit at the end of first year the student must complete: (Total credits = 8)
 a) An internship / OJT of 8 - 10 weeks (4 credits)
 b) Additional Course 1 (4 credits) (Vocational Skill Course (VSC) / Skill Enhancement Course (SEC))

Sem	Multidisciplinary Minor Course (MMC)	
I (MMC - I)	Course Code	230GRAM24_01
	Course Name	Sensors and Automation
II (MMC - II)	Course Code	230GETM16_02
	Course Name	IoT Basics and Applications

Dr. Pritam Hait
 Programme Coordinator, MTech-STR

Dr. M. Nithya
 Director, School of Civil and Environmental Sciences

Dr. R. S. Deshpande
 Dean, Faculty of Science and Technology

Dr. Anuradha S. Deshpande
 Associate Dean (Academics)





Prof. B.B. Ahuja
 Vice Chancellor, JSPM University Pune

Sem.	Programme Elective Course (PEC)			
	Specialization	Structural Engineering		
III (PEC - I)	Course Code	230GSEM08_03	230GSEM09_03	230GSEM10_03
	Course Name	Theory of Plates and Shells	Theory of Elasticity and Plasticity	Advanced Design of Steel Structures
III (PEC - II)	Course Code	230GSEM11_03	230GSEM12_03	230GSEM13_03
	Course Name	Structural Health Monitoring and Retrofitting	Soil Structure Interaction	Stability Analysis of Slopes, Dams and Embankments
IV (PEC - III)	Course Code	230GSEM14_04	230GSEM15_04	230GSEM16_04
	Course Name	Micro-Structure and Innovations in Structural Concrete	Advanced Concrete Technology and Applications	Prefabricated Structures
IV (PEC - IV)	Course Code	230GSEM17_04	230GSEM18_04	230GSEM21_04
	Course Name	Design of Substructure	Design of Tall Buildings	Design of Steel Concrete Composite Structures

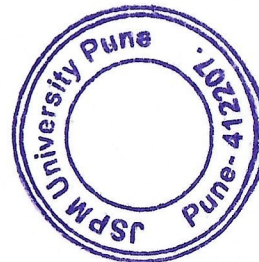
Sem.	Mandatory Learning Course (MLC*) – Audit Course	
IV (Audit Course - I)	Course Code	230UPOB02_04
	Course Name	Introduction to Indian Constitution


Mr. Sharanbasappa Kori
 Programme Coordinator, MTech- STR


Dr. M. Nithya
 Director(I/C), School of Civil and Environmental Sciences


Dr. R. S. Deshpande
 Dean, Faculty of Science and Technology


Dr. Anuradha S. Deshpande
 Associate Dean (Academics)




Prof. B.B. Ahuja
 Vice Chancellor, JSPM University Pune