

JSPM University Pune

Faculty of Science and Technology

School of Mechanical and
Manufacturing Sciences

Course Structure

Ph.D (Mechanical Engg.)



JSPM University Pune

FACULTY OF SCIENCE AND TECHNOLOGY

SCHOOL OF MECHANICAL AND MANUFACTURING SCIENCES

COURSE STRUCTURE
(NEP 2020 Aligned)

W. E. F

2023-2024

RELEASE DATE

01/07/2023

COURSE WORK - DOCTOR OF PHILOSOPHY (MECHANICAL ENGINEERING)

REVISION NO.

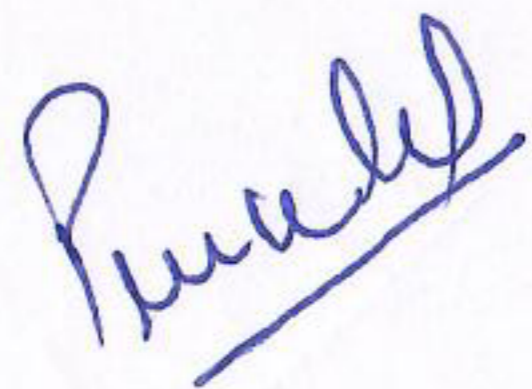
0 (NEP)

SEMESTER I (LEVEL 8)

COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS
TYPE	CODE	COURSE NAME	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	--	Domain Specific Course 1 / MOOC	3	-	-	-	30	30	40	100	-	-	-	-	100	3
PCC	--	Domain Specific Course 2 / MOOC	3	-	-	-	30	30	40	100	-	-	-	-	100	3
PSBC	230GMAD01	Foundations of Mathematical Modelling and Statistical Techniques	3	-	-	-	30	30	40	100	-	-	-	-	100	3
RMC	230IRMD01	Research and Publication Ethics	2	-	-	-	30	30	40	100	-	-	-	-	100	2
RMC	230IRMD02	Writing Research Proposal	1	-	-	-	-	-	-	-	-	-	50	50	50	1
RMC	230IRMD03	Writing Literature Review	2	-	-	-	-	-	-	-	-	-	100	100	100	2
SLC	230ISR01	Seminar	-	-	-	8	-	-	-	-	-	-	50	50	50	2
TOTAL			14	0	0	8									600	16



Domain Specific Course / MASSIVE OPEN ONLINE COURSES (MOOC)					
PCC (Domain 1)	Course Code	230GMED01	230GMED04	230GMED06	-
	Course Name	Industry 4.0	Introduction to Industry 4.0 and Industrial Internet of Things (NPTEL)	Advanced materials and Processes (NPTEL)	-
PCC (Domain 2)	Course Code	230GMED02	230GMED05	230GMED03	230GMED08
	Course Name	Computational Fluid Dynamics	Computational Fluid Dynamics for Incompressible Flows (NPTEL)	Smart Materials	Techniques of Materials Characterization (NPTEL)



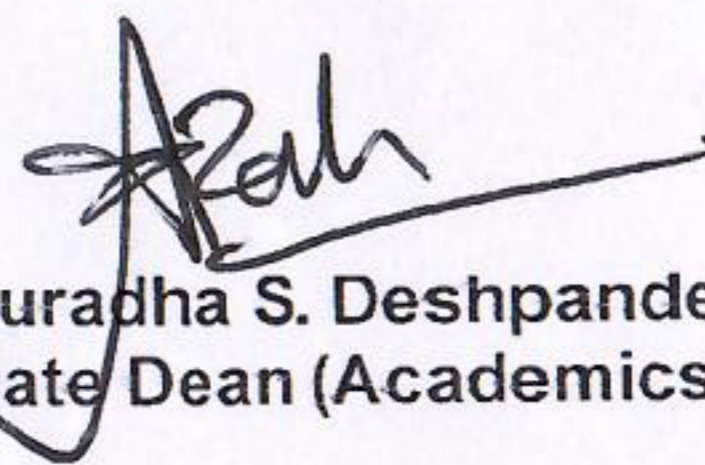
Dr. Prerna Mishra
School Ph.D. Coordinator



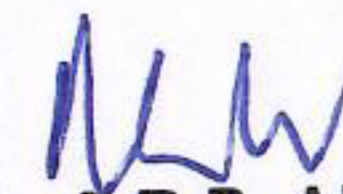
Prof. Prashant Ambad
Director, SMMS, FST



Prof. 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



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1.0 (NEP)

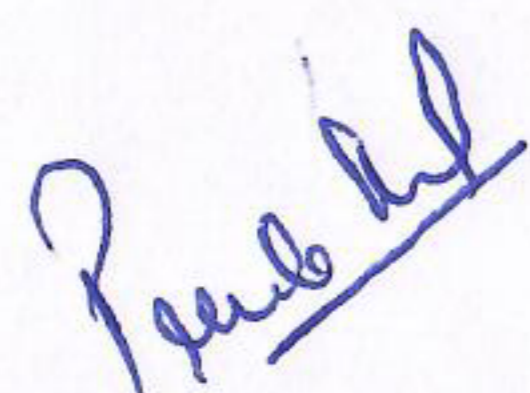
COURSE WORK - DOCTOR OF PHILOSOPHY (MECHANICAL ENGINEERING)

SEMESTER I (LEVEL 8)

COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS
TYPE	CODE	COURSE NAME	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	--	Domain Specific Course 1 / MOOC	3	-	-	-	30	30	40	100	-	-	-	-	100	3
PCC	--	Domain Specific Course 2 / MOOC	3	-	-	-	30	30	40	100	-	-	-	-	100	3
PSBC	230GMAD11	Statistical Methods	3	-	-	-	30	30	40	100	-	-	-	-	50	2
RMC	231IRMD01	Research and Publication Ethics	2	-	-	-	30	30	40	50	-	-	50	50	50	2
RMC	231IRMD02	Research Proposal Writing	2	-	-	-	-	-	-	-	-	-	50	50	50	2
RMC	231IRMD03	Writing Literature Review	2	-	-	-	-	-	-	-	-	-	50	50	50	1
SLC	231ISR01	Seminar	-	-	-	4	-	-	-	-	-	-	50	50	50	1
TOTAL			15			4									500	16



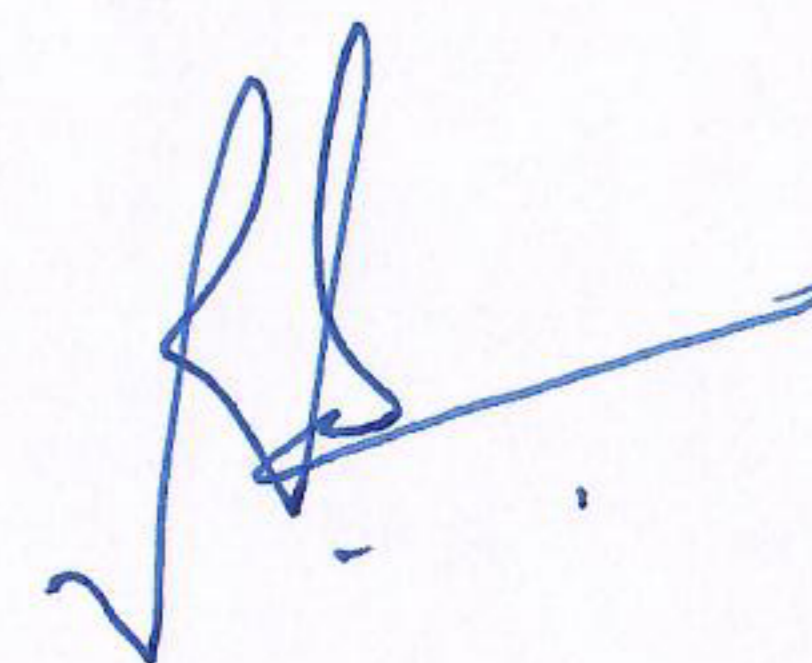
		Domain Specific Course / MASSIVE OPEN ONLINE COURSES (MOOC)						
		230GMED01	230GMED04	230GMED06	230GMED07	230GMED10		
PCC (Domain 1)	Course Code	230GMED01	230GMED04	230GMED06	230GMED07	230GMED10		
	Course Name	Industry 4.0	Introduction to Industry 4.0 and Industrial Internet of Things	Advanced materials and Processes	Introduction to Machine Learning	Materials Characterization		
PCC (Domain 2)	Course Code	230GMED02	230GMED05	230GMED03	230GMED08	230GCSD06	230GMED09	230GMED11
	Course Name	Computational Fluid Dynamics	Computational Fluid Dynamics for Incompressible Flows	Smart Materials	Techniques of Materials Characterization	Artificial Intelligence: Search Methods for Problem Solving	Machine Learning using Python Programming	Advances in Additive Manufacturing of Materials: Current status and emerging opportunity



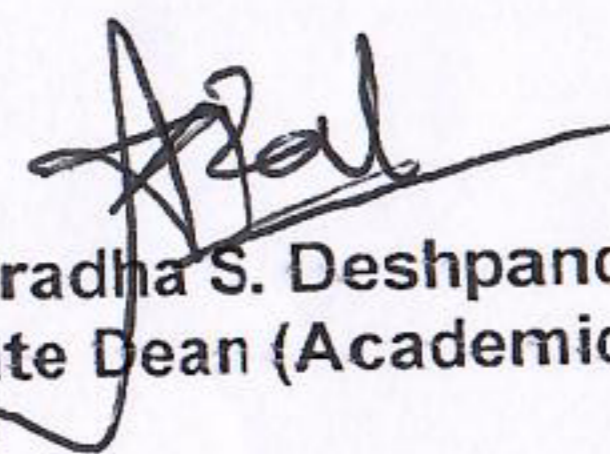
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