

Kolhapur Institute of Technology's College of Engineering, Kolhapur



Curriculum Structure

for

**Mechanical Engineering Programme
(Under Graduate Programme)
From Academic Year 2017-2018**

Kolhapur Institute of Technology's College of Engineering, Kolhapur
Teaching and Evaluation scheme for
Second Year B. Tech. Programme in Mechanical Engineering Semester – III



Course Code	Course Name	Teaching Scheme (Hrs/Week)				Evaluation Scheme			
		L	T	P	C	Component	Marks		
							Max	Min passing	
UMCH0301	Engineering Mathematics- III	3	1	-	4	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0302	Engineering Thermodynamics	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0303	Fluid Mechanics	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0304	Manufacturing Processes	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0305	Machine Drawing and Computer Aided Drafting	3	1	-	4	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH361	Electrical Technology (Audit Course)	2	-	-	0		100		40
UMCH0330	Object oriented Programming Lab	-		2	1	ISE	25	10	
UMCH0331	Machine Drawing Lab	-		2	1	ISE	25	10	
						ESE(POE)	25	10	
UMCH0332	Thermal Engineering Lab	-		2	1	ISE	25	10	
						ESE(OE)	25	10	
UMCH0333	Fluid Mechanics Lab	-	-	2	1	ISE	25	10	
						ESE(POE)	25	10	
UMCH0334	Workshop Practice II	-	-	2	1	ISE	25	10	
Total		17	2	10	22	Total : 800			
		Contact Hours/Week : 29 Hrs							

Note: **ESE:** End Semester Examination, **MSE:** Mid Semester Examination, **ISE:** In Semester Evaluation.

Kolhapur Institute of Technology's College of Engineering, Kolhapur
Teaching and Evaluation scheme for



Second Year B.Tech. Programme in Mechanical Engineering - Semester IV

Course Code	Course Name	Teaching Scheme (Hrs/Week)				Evaluation Scheme			
		L	T	P	C	Component	Marks		
							Max	Min for Passing	
UMCH0401	Analysis of Mechanical Elements	3	1	-	4	ISE- I	10	40	20
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0402	Machine Tools	3	1	-	4	ISE- I	10	40	20
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0403	Kinematics of Machines	3	-	-	3	ISE- I	10	40	20
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0404	Turbo Machines	3	-	-	3	ISE- I	10	40	20
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0405	Metallurgy	3	-	-	3	ISE- I	10	40	20
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH461	Environmental Studies (Audit Course)	2	-	-	0		100		40
UMCH0431	Workshop Practice III	-	-	2	1	ISE	25	10	
						ESE (POE)	25	10	
UMCH0432	Kinematics of Machines Lab	-	-	2	1	ISE	25	10	
UMCH0433	Turbo Machines Lab	-	-	2	1	ISE	25	10	
UMCH0434	Computer Graphics Lab	-	-	2	1	ISE	25	10	
						ESE(POE)	25	10	
UMCH0435	Metallurgy Lab	-	-	2	1	ISE	25	10	
						ESE(OE)	25	10	
	Total	17	2	10	22	Total: 800			
		Contact Hours/Week: 29 Hrs							

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Kolhapur Institute of Technology's College of Engineering, Kolhapur
Teaching and Evaluation scheme for



Third Year B.Tech. Programme in Mechanical Engineering - Semester V

Course Code	Course Name	Teaching Scheme (Hrs/Week)				Evaluation Scheme			
		L	T	P	C	Component	Marks		
							Max	Min For Passing	
UMCH0501	Metrology and Quality Control	3	-	-	3	ISE- I	10	20	40
					MSE	30			
					ISE-II	10			
					ESE	50			
UMCH0502	Heat Transfer	3	-	-	3	ISE- I	10	20	40
					MSE	30			
					ISE-II	10			
					ESE	50			
UMCH0503	Dynamics of Machines	3		-	3	ISE- I	10	20	40
					MSE	30			
					ISE-II	10			
					ESE	50			
UMCH0504	Design of Machine Elements	3	1	-	4	ISE- I	10	20	40
					MSE	30			
					ISE-II	10			
					ESE	50			
UMCH0505	Manufacturing Engineering	3	-	-	3	ISE- I	10	20	40
					MSE	30			
					ISE-II	10			
					ESE	50			
UMCH0561	Control Engineering (Audit Course)	3	-	-	0		100		40
UMCH0531	CAD/CAM Lab	1	-	2	2	ISE	25	10	
						ESE(POE)	25	10	
UMCH0532	Measurement Lab	-	-	2	1	ISE	25	10	
UMCH0533	Heat Transfer Lab	-	-	2	1	ISE	25	10	
						ESE(POE)	25	10	
UMCH0534	Dynamics of Machines Lab.	-	-	2	1	ISE	25	10	
						ESE(OE)	25	10	
UMCH0541	Metrology and Quality Control	-	-	2	1	ISE	25	10	
	Total	19	1	10	22	Total : 800			
		Contact Hours/Week: 30 Hrs							

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Kolhapur Institute of Technology's College of Engineering, Kolhapur
Teaching and Evaluation scheme for



Third Year B.Tech. Programme in Mechanical Engineering - Semester VI

Code	Course Name	Teaching Scheme (Hrs/Week)				Evaluation Scheme			
		L	T	P	C	Component	Marks		Min For Passing
							Max		
UMCH0601	Machine Design	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0602	Industrial Hydraulics and Pneumatics	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0603	Internal Combustion Engines	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0621*	Professional Elective – I	3	1	-	4	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0671#	Open Elective- I	3	1	-	4	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH661	Process Engineering (Audit Course)	2	-	-	0		100		40
UMCH0631	Workshop Practice IV	-	-	2	1	ISE	50	20	
UMCH0632	Industrial Hydraulics and Pneumatics Lab			2	1	ESE(POE)	25	10	
UMCH0634	I C Engines Lab	-	-	2	1	ISE	25	10	
UMCH0635	Machine Design Lab	-	-	2	1	ESE(POE)	25	10	
UMCH0641	Industrial Training and Mini Project	-		2	1	ISE	25	10	
	Total	17	2	10	22	ESE(OE)	25	10	
		Contact ours/Week: 29 Hrs				Total : 850			

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Professional Elective I*	
Course Code	Course Name
UMCH0621	Safety and Maintenance Engineering
UMCH0622	Computational Fluid Dynamics
UMCH0623	Operations Management
UMCH0624	Industrial Product Design
UMCH0625	Industrial Automation and Robotics
UMCH0626	Applied Numerical Methods

Open Elective I #	
Course Code	Course Name
UMCH0671	Energy Conservation and Management
UMCH0672	Biomedical Engineering

Kolhapur Institute of Technology's College of Engineering, Kolhapur
Teaching and Evaluation scheme for



Final Year B.Tech. Programme in Mechanical Engineering - Semester VII

Code	Course Name	Teaching Scheme (Hrs/Week)				Evaluation Scheme			
		L	T	P	C	Component	Marks		Min For Passing
		Max							
UMCH0701	Industrial Engineering	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0702	Mechatronics	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0703	Refrigeration and Air Conditioning	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0721**	Professional Elective II	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH0771##	Open Elective II	3	-	-	3	ISE- I	10	20	40
						MSE	30		
						ISE-II	10		
						ESE	50		
UMCH761	Industrial Management and Operations Research (Audit Course)	3	-	-	0		100		40
UMCH0731	Refrigeration and Air Conditioning Lab	-	-	2	1	ISE	25	10	
UMCH0732	Mechatronics Lab	-	-	2	1	ISE	25	10	
UMCH0734	Professional Elective II- Lab	-	-	2	1	ESE(POE)	25	10	
UMCH0735	Industrial Engineering Lab			2	1	ISE	25	10	
UMCH0751	Project-I and Seminar	-	-	2	1	ISE	50	20	
						ESE(OE)	25	10	
	Total	18	0	10	20	Total: 825			
		Contact Hours/Week 28 Hrs							

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Professional Elective II**	
Course Code	Course Name
UMCH0721	Finite Element Analysis
UMCH0722	Noise and Vibrations
UMCH0723	Automobile Engineering
UMCH0724	Advanced Foundry Technology
UMCH0725	Advanced Manufacturing Processes

Open Elective II ##	
Course Code	Course Name
UMCH0771	Product Lifecycle Management
UMCH0772	Enterprise Resource Planning

Kolhapur Institute of Technology's College of Engineering, Kolhapur
Teaching and Evaluation scheme for



Final Year B.Tech. Programme in Mechanical Engineering - Semester VIII

Code	Course Name	Teaching Scheme (Hrs/Week)				Evaluation Scheme			
						Scheme	Marks		
		L	T	P	C		Max	Min For Passing	
UMCH0801	Energy and Power Engineering	3	-	-	3	ISE- I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UMCH0802	Professional Elective III	3	-	-	3	ISE- I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UMCH0852	Project Phase II/ Internship	-	-	12	6	ISE I	75	30	
						ISE II	75	30	
						ESE(OE)	150	60	
	Online Certificate Course - I								
	Online Certificate Course - II								
	Total	6	-	12	12				
		Contact Hours/Week: 18 Hrs				Total : 500			

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Online Certificate Course based on Edx Coursera, Mooc will be offered as per suggestion by guide

Professional Elective III***	
Course Code	Course Name
UMCH0726	Design of Mechanical Systems
UMCH0727	Costing and Finance Management
UMCH0728	Marketing Management
UMCH0729	Total Quality Management
UMCH0730	Cryogenics
UMCH0731	Design of Thermal Systems

Category	Existing	AICTE
Humanities and Social Sciences including Management Courses	3.5%	7.5%
Basic Science Courses	12.9%	15.6%
Engineering Science courses - workshop, drawing, basics of electrical/computer	21.2%	15.0%
Professional core courses	47.1%	30.0%
Professional Elective courses relevant to chosen specialization	6.5%	11.3%
Open subjects – Electives from other technical and /or emerging subjects	4.1%	11.3%
Project work, seminar and internship in industry or elsewhere	4.7%	9.4%
TOTAL	100 %	100 %

