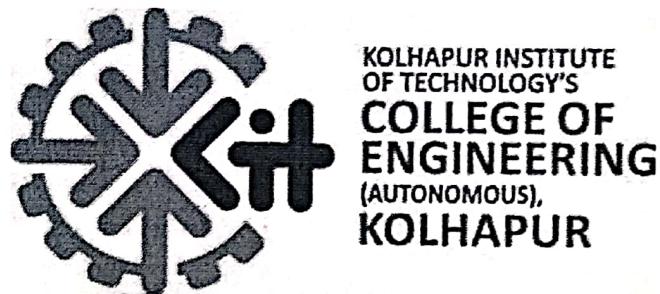


Kolhapur Institute of Technology's College of Engineering, Kolhapur



**KOLHAPUR INSTITUTE
OF TECHNOLOGY'S
COLLEGE OF
ENGINEERING
(AUTONOMOUS),
KOLHAPUR**

Curriculum (Structure)

for

**B.TECH
Mechanical Engineering Programme
(Under Graduate Programme)
With Effect From Academic Year
2022-2023**

Dr. U. S. Bhapkar

Head

**Department of Mechanical Engg.
Kolhapur Institute of Technology's
College of Engineering (Autonomous)
Kolhapur**



Prof. Dr. Ajit S. Patil

Head

**Department of Comp. Sci. & Engg.
KIT's College of Engg. (Autonomous)**

**Prof. Dr. Ajit S. Patil
Dean Academics**

KIT's College of Engg. (Autonomous).



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Kolhapur Institute of Technology's College of Engineering (Autonomous), Kolhapur
Teaching and Evaluation scheme for
Second Year B.Tech. Programme in Mechanical Engineering - Semester III
WITH EFFECT FROM AY 2022-23

Course Code	Course Name	Curriculum Component	Teaching Scheme (Hrs/Week)					Evaluation Scheme		
			L	T	P	C		Component	Marks	
Max	Min For Passing									
UMEC0301	Engineering Mathematics-III	BS	3	1		4		ISE-I	10	20
UMEC0302	Applied Thermodynamics	PC	3			3		MSE	30	
UMEC0303	Object Oriented Programming	PC	3			3		ISE-II	10	
UMEC0304	Electrical and Electronics Engineering	PC	3			3		ESE	50	
UMEC0305	Machine Tools	PC	3			3		ISE-I	10	20
UMEA0361	Environmental Studies (Audit Course-1)	HS	2			0		MSE	30	
UMEC0306	Thermal Engineering Lab	PC			2	1		ISE-II	10	
UMEC0307	Object Oriented Programming Lab	PC			2	1		ESE	50	
UMEC0308	CAD-CAM Lab	PC			2	1		ISE-I	10	20
UMEC0309	Machine Drawing Lab	PC			2	1		MSE	30	
UMEC0310	Sensors and Actuators Lab	PC			2	1		ISE-II	10	
UMEC0311	Workshop Practice-II	PC			2	1		ESE	50	
Total			17	1	12	22		ESE	100	40
TOTAL CONTACT HOURS: 30, TOTAL CREDITS: 22										



Dr. U. S. Bhapkar
Head
Department of Mechanical Engg.
Kolhapur Institute of Technology's
College of Engineering (Autonomous)

Prof. Ajit S. Patil
Dean Academics
KIT's College of Engg. (Autonomous),
Kolhapur.





Kolhapur Institute of Technology's College of Engineering (Autonomous), Kolhapur
Teaching and Evaluation scheme for
Second Year B.Tech. Programme In Mechanical Engineering - Semester IV
WITH EFFECT FROM AY 2022-23

Course Code	Course Name	Curriculum Component	Teaching Scheme (Hrs/Week)				Evaluation Scheme				
			L	T	P	C	Component	Marks			
								Max	Min For Passing		
UMEC0401	Fluid Mechanics and Hydraulic Machines	PC	3				ISE-I	10	20		
UMEC0402	Analysis of Mechanical Elements	PC	3	1			MSE	30		40	
UMEC0403	Kinematics of Machines	PC	3				ISE-II	10			
UMEC0404	Materials Engineering	PC	3				ESE	50			
UMEC0405	Manufacturing Processes	PC	3				ISE-I	10	20		
UMEA0401	Indian Constitution (Audit Course-II)	HS	2				MSE	30		40	
UMEC0406	Fluid Mechanics and Hydraulic Machines Lab	PC			2	1	ISE-II	10			
UMEC0407	Kinematics of Machines Lab	PC			2	1	ESE	50			
UMEC0408	Materials Engineering Lab	PC			2	1	ISE-I	10	20		
UMEC0409	Industrial Fluid Power Lab	PC			2	1	MSE	30		40	
UMEC0410	Workshop Practice-III	PC			2	1	ISE-II	10			
UMEC0411	Project Lab-I	PRJ			2	1	ESE	50			
Total			17	1	12	22	ESE	100	40		
TOTAL CONTACT HOURS: 30, TOTAL CREDITS: 22											



(U.S.B)

Dr. U. S. Bhapkar

Head

Department of Mechanical Engg.
 Kolhapur Institute of Technology's
 College of Engineering (Autonomous)
 Kolhapur

Prof. Ajit S. Patil
Dean Academics
KIT's College of Engg. (Autonomous),
Kolhapur.



Kolhapur Institute of Technology's College of Engineering (Autonomous), Kolhapur
Teaching and Evaluation scheme for
Third Year B.Tech. Programme In Mechanical Engineering - Semester V
WITH EFFECT FROM AY 2023-24

Course Code	Course Name	Curriculum Component	Teaching Scheme (Hrs/Week)				Evaluation Scheme		
			L	T	P	C	Component	Max	Marks
UMEC0501	Heat Transfer	PC	3				ESE-I	10	20
UMEC0502	Metrology and Quality Control	PC	3				MSE	30	40
UMEC0503	Dynamics of Machines	PC	3				ISE-II	10	
UMEC0504	Machine Design	PC	3				ESE	50	20
UMEE051*	Program Elective-I	PE	3				ISE-I	10	
UME005**	Open Elective-I	OE	3				MSE	30	20
UMEA0501	Intellectual Property Rights (Audit Course-III)	HS	2				ISE-II	10	40
UMEC0505	Heat Transfer Lab	PC				2	ESE	50	20
UMEC0506	Geometrical Dimensions and Tolerancing Lab	PC				1	ISE-I	10	
UMEC0507	Dynamics of Machines Lab	PC				2	MSE	30	
UMEC0508	Project Lab-II	PRJ				1	ISE-II	10	
Total			20	0	8	22	ESE	50	20
TOTAL CONTACT HOURS: 28, TOTAL CREDITS: 22									

CODE	PROGRAM ELECTIVE-I
UMEE0511	Numerical Methods
UMEE0512	Advanced Energy Technology
UMEE0513	Safety and Maintenance Engineering
UMEE0514	Smart Materials
UMEE0505	Industrial Product Design
UMEE0516	Tribology
UMEE0517	Project Management

CODE	OPEN ELECTIVE-I
UME00501	Engineering Economics
UME00502	Supply Chain Management
UME00503	Enterprise Resource Planning
UME00504	Innovative Tools and Methods for Entrepreneurship
UME00505	Operations Research



Dr. U. S. Bhapkar
Head
Department of Mechanical Engg.
Kolhapur Institute of Technology's
College of Engineering (Autonomous)
Kolhapur

Prof. Ajit S. Patil
Dean Academics
KIT's College of Engg. (Autonomous),
Kolhapur.





Kolhapur Institute of Technology's College of Engineering (Autonomous), Kolhapur
Teaching and Evaluation scheme for
Third Year B.Tech. Programme In Mechanical Engineering - Semester VI
WITH EFFECT FROM AY 2023-24

Course Code	Course Name	Curriculum Component	Teaching Scheme (Hrs/Week)				Evaluation Scheme			
			L	T	P	C	Component	Marks		
Max	Min For Passing									
UMEC0601	Design of HVAC and Refrigeration Systems	PC	3			3	ISE-I	10	20	40
UMEC0602	Power Plant Engineering	PC	3			3	MSE	30		
UMEC0603	Mechatronics System	PC	3			3	ISE-II	10		
UMEC0604	Control Systems	PC	2			2	ESE	50	20	
UMEE062*	Program Elective-II	PC	3			3	ISE-I	10		
UME006**	Open Elective-II	OE	3			3	MSE	30	20	40
UMEA0601	Digital Marketing (Audit Course-IV)	HS	2			0	ISE-II	10		
UMEC0605	HVAC and Refrigeration Lab	PC			2	1	ESE	50	20	
UMEC0606	Power Plant Engineering Lab	PC			2	1	ISE	25	10	
UMEC0607	Mechatronics and Industry 4.0 Lab	PC			2	1	ESE	25	10	
UMEC0608	Vibration measurement and Condition Monitoring Lab	PC			2	1	ESE(POE)	25	10	
UMEC0608	Project Lab-III	PRJ			2	1	ISE	25	10	
Total			19	0	10	22	ISE	25	10	
TOTAL CONTACT HOURS: 29, TOTAL CREDITS: 22										Total 750 300

CODE	PROGRAM ELECTIVE-II
UMEE0621	Mechanical Vibrations
UMEE0622	Advanced Automobile Design
UMEE0623	Computational Fluid Dynamics
UMEE0624	Total Quality Management
UMEE0625	Entrepreneurship Development
UMEE0626	Computer Integrated Manufacturing

CODE	OPEN ELECTIVE-II
UME00601	Product Lifecycle Management
UME00602	Advanced Energy Technology
UME00603	Project Management
UME00604	Smart Materials
UME00605	Introduction to Robotics




Dr. U. S. Bhapkar
Head
Department of Mechanical Engg.
Kolhapur Institute of Technology's
College of Engineering (Autonomous),
Kolhapur.


Prof. Ajit S. Patil
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KIT's College of Engg. (Autonomous),
Kolhapur.

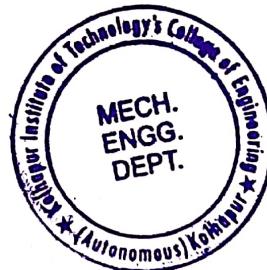


Kolhapur Institute of Technology's College of Engineering (Autonomous), Kolhapur
Teaching and Evaluation scheme for
Final Year B.Tech. Programme In Mechanical Engineering - Semester VII
WITH EFFECT FROM AY 2024-25

Course Code	Course Name	Curriculum Component	Teaching Scheme (Hrs/Week)				Evaluation Scheme		
			L	T	P	C	Component	Marks	
								Max	Min For Passing
UMEC0701	Finite Element Analysis	PC	3				ISE-I	10	20
UMEC0702	Manufacturing and Process Engineering	PC	3				MSE	30	
UMEC0703	Artificial Intelligence and Machine Learning	PC	3				ISE-II	10	
UMEC0704	Industrial Automation and Robotics	PC	3				ESE	50	20
UMEE073*	Program Elective-III	PE	3				ISE-I	10	20
UMEA0701	Finance Management (Audit Couse-V)	HS	2				MSE	30	
UMEC0705	Finite Element Analysis Lab	PC				2	ISE-II	10	
UMEC0706	Digital Manufacturing Lab	PC				1	ESE	50	20
UMEE074*	Program Elective-III Lab	PE				ISE-I	10	20	
UMEC0707	Project Phase-I	PRJ				MSE	30		40
Total			17	0	10	20	ISE-II	10	
TOTAL CONTACT HOURS: 27, TOTAL CREDITS: 20									

CODE	PROGRAM ELECTIVE-III
UMEE0731	Electric and Hybrid Vehicles
UMEE0732	Fracture Mechanics
UMEE0733	Metal Forming and Joining Technology
UMEE0734	Advanced Manufacturing Processes

CODE	PROGRAM ELECTIVE-III LAB
UMEE0741	Electric and Hybrid Vehicles Lab
UMEE0742	Fracture Mechanics Lab
UMEE0743	Metal Forming and Joining Technology Lab
UMEE0744	Advanced Manufacturing Processes Lab




Dr. U. S. Bhapkar

Head

Department of Mechanical Engg.
Kolhapur Institute of Technology's
College of Engineering (Autonomous)
Kolhapur



Prof. Ajit S. Patil
Dean Academics
KIT's College of Engg. (Autonomous),
Kolhapur,

Kolhapur Institute of Technology's College of Engineering (Autonomous), Kolhapur
Teaching and Evaluation scheme for
Final Year B.Tech. Programme In Mechanical Engineering - Semester VIII
WITH EFFECT FROM AY 2024-25

Course Code	Course Name	Curriculum Component	Teaching Scheme (Hrs/Week)					Evaluation Scheme		
			L	T	P	C		Component	Marks	
Max	Min For Passing									
UMEE084*	Program Elective-IV	PE	3			3		ISE-I	10	20
UMEE085*	Program Elective-V	PE	3			3		MSE	30	40
UMEC0801	Project Phase-II	PRJ			8	4		ISE-II	10	
UMEC0802	Internship	PRJ			4	2		ESE	50	20
Total			6	0	12	12		ISE-I	10	20
TOTAL CONTACT HOURS: 18 TOTAL CREDITS: 12										

CODE	PROGRAM ELECTIVE-IV
UMEE0841	Cryogenics
UMEE0842	Thermal Management and Packaging of Electronics
UMEE0843	Design of Mechanical Systems
UMEE0844	Operations Research
UMEE0845	Industrial Engineering
UMEE0846	Internet of Things
CODE	PROGRAM ELECTIVE-V
UMEE0851	Gas Turbines and Jet Propulsion
UMEE0852	Design of Thermal Systems
UMEE0853	Process Equipment Design
UMEE0854	Supply Chain Management
UMEE0855	Material Handling Systems
UMEE0856	Production Management




Dr. U. S. Bhapkar
 Head

Department of Mechanical Engg.
 Kolhapur Institute of Technology's
 College of Engineering (Autonomous).


Prof. Ajit S. Patil
 Dean Academics
 KIT's College of Engg. (Autonomous),
 Kolhapur.