

Name of the Programme: B. Tech. (Mechatronics Engineering)

Year of the Programme: First year

Semester: I & II

Semester - I												Semester - II											
Sr. No.	Module / Subject Code	Name of the Module	Theory Hours per week	Tutorials Hours per week	Practicals Hours per week	Total no. of hours for the subject	Credit/s	Credit/s types	Duration of Examination (Hrs)		Mode of Exam	Examination Scheme (Weightage)								Template Codes	GR applicable (Yes / No)	Remarks	
									Term End Examination	Continuous Evaluation		Distribution of Continuous Evaluation Marks					TEE		Total				
												Test I	Test II	Term work *	Total Marks	Scaled to (Marks)	Marks (Question Paper)	Scaled to (Marks)	Marks (Continuous Evaluation+ TEE)				Weightage %
1	BTMA01001	Mathematics-I	3	1	0	4	4	full credit	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	#
2	BTMA01002	Basic Electrical Engineering	3	1	2	6	5	full credit	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	##
3	BTMA01003	Physics	3	1	2	6	5	full credit	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	##
4	BTMA01004	Engineering Graphics & Design	1	0	4	5	3	full credit	3	--	Practical	10	10	30	50	50	100	50	100	100	7031	Yes	NUE
5	BTMA01005	Constitution of India	2	0	0	2	0	non credit	--	Continuous	--	10	10	30	50	50	--	--	50	100	7032	No	
Total			12	3	8	23	17	--	12	--	--	50	50	150	250	250	400	200	450				
Semester - II																							
1	BTMA02008	Mathematics-II	3	1	0	4	4	full credit	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	#
2	BTMA02009	Programming for Problem Solving	3	0	4	7	5	full credit	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	##
3	BTMA02010	Chemistry	3	1	2	6	5	full credit	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	##
4	BTMA02011	Workshop / Manufacturing Practices	1	0	4	5	3	full credit	--	Continuous Evaluation	--	--	--	50	50	50	--	--	50	100	7032	No	
5	BTMA02012	English	2	0	2	4	3	full credit	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	##
Total			12	2	12	26	20	--	12	--	--	40	40	170	250	250	400	200	450				

* Term Work = Viva / Presentations/ Journals/ assignments/ quizzes / MCQs/Business plans/Role plans etc.

Syllabus common for B.Tech. (All Stream) & MBA Tech. (All Stream) / All Programme, can use common question paper.

Syllabus common for different streams/ Programme can use common question paper.

NUE = Non University Examination (Examination conducted at school level)

HOD:_____

Dr. Ajay Phrike

Dean :_____

Dr. N. T. Rao

Date: 15/04/2019

Name of the Programme: B. Tech. Mechatronics Engineering

Year of the Programme: Second year

Semester: III & IV

Sr. No.	Module / Subject Code	Name of the Module	Theor y Hour s per week	Practi cals Hour s per week	Tutor ials Hour s per week	Total no. of hours for the subje ct	Credi t/s	Duration of Examination (Hrs)		Mode of Exam	Examination Scheme (Weightage)									Templa te Codes	GR applica ble (Yes / No)	R e m a r k
								Term End Exami nation	Only ICA		Distribution of ICA Marks					TEE		Total				
										Test I	Test II	Term work *	Total Mark s	Scale d to (Mark s)	Mark s (Ques tion Paper)	Scale d to (Mark s)	Marks (ICA+ TEE)	Weig htage %				
Semester - III																						
1	BTMA03007	Mathematics -III	3	0	1	60	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
2	BTMA03008	Presentation and Communication Techniques	2	0	0	30	2	--	Only ICA	--	10	10	30	50	50	-	-	50	100	7032	No	
3	BTMA03009	Digital Electronics	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
4	BTMA03010	Engineering Mechanics	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
5	BTMA03011	Manufacturing Processes	3	0	0	45	3	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
6	BTMA03012	Analog Devices and Circuits	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	50	100	7031	Yes	
Total			17	6	1	360	21	15	--	--	60	60	180	300	300	500	250	500				
Semester - IV																						
1	BTMA04008	Mathematics - IV	3	0	1	60	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
2	BTMA04009	Principles of Economics and Management	3	0	0	45	3	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
3	BTMA04010	Control Systems	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
4	BTMA04011	Microprocessor and Microcontroller	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
5	BTMA04012	Principles of Communication Engineering	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
6	BTMA04013	Strength of Materials	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
7	BTMA04014	Environmental Studies	2	0	0	30	0	--	Only ICA	--	10	10	30	50	50	-	-	50	100	7032	No	
Total			20	8	1	435	23	18	--	--	70	70	210	350	350	600	300	650				

*Term Work = Viva / Presentations/ Journals/ assignments/ quizzes / MCQs/Business plans/Role plans etc.

syllabus common for different streams/ Programme can use common question paper. (for eg : B.TECH(Stream) & MBA.TECH (Stream))

NUE = Non University Examination (Examination conducted at school level)

Pls. Note :-Any approval/change should be highlighted in gray as per academic councils meeting, dated

HOD:_____

Dean : _____

Name of the Programme: B. Tech. Mechatronics Engineering

Year of the Programme: Third Year

Semester: V

Semester - V											Semester - V											Templa te Codes	GR applica ble (Yes / No)	R e m a r k
Sr. No.	Module / Subject Code	Name of the Module	Theor y Hour s per week	Practica ls Hour s per week	Tutorials Hour s per week	Total no. of hours for the subject (In term)	Cred it/s	Duration of Examination (Hrs)		Mode of Exam	Examination Scheme (Weightage)					TEE		Total						
								Term End Examination	Only ICA		Test I	Test II	Term work *	Total Marks	Scaled to (Marks)	Mark s (Ques tion Paper)	Scale d to (Mark s)	Scaled Marks (ICA+ TEE)	Weig htage %					
1		Elements of Biology	3	0	1	60	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes			
2		Theory of Machines	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes			
3		Industrial Electronics and Drives	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes			
4		Essence of Indian Traditional Knowledge	2	0	0	30	0	--	Only ICA	--	--	50	50	50	--	--	50	100	7032	No				
5		Cost and Management Accounting for Engineers	2	0	0	30	2	2	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes			
6		Electro-Mechanical Workshop	0	2	0	30	1	--	Only ICA	--	--	50	50	50	--	--	50	100	7032	No				
7	Professional Elective Course-1 (Choose any one)																							
		Thermodynamics and Heat Transfer	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes			
		Materials Engineering	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes			
		Fluid Mechanics & Machinery	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes			
8	Professional Elective Course-2 (Choose any one)																							
		Industrial Data Communication	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes			
		Python Programming	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes			
		Signals and Systems	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes			
Total			19	10	1	450	23	17	--	--	60	60	280	400	400	600	300	700						

Name of the Programme: B. Tech. Mechatronics Engineering

Year of the Programme: Third Year

Semester: VI

Sr. No.	Module / Subject Code	Name of the Module	Theory Hours per week	Practicals Hours per week	Tutorials Hours per week	Total no. of hours for the subject (In term)	Credits/s	Duration of Examination (Hrs)		Mode of Exam	Examination Scheme (Weightage)								Template Codes	GR applicable (Yes / No)	Remarks	
											Distribution of ICA Marks					TEE		Total				
										Term End Examination	Only ICA	Written / OffLine/Online/Computer based / Practical/Viva /Jury/ Presentation	Test I	Test II	Term work *	Total Marks	Scaled to (Marks)	Marks (Question Paper)				Scaled to (Marks)
Semester - VI																						
1		PLC and Data Acquisition	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	50	100	7031	Yes	
2		Mechanical Measurements and Instrumentation	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	50	100	7031	Yes	
3		Professional Ethics and Legal Aspects	2	0	0	30	2	2	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
4		Research Methodology	1	2	0	45	2	--	Only ICA	--	--	--	50	50	50	--	--	50	100	7032	No	
5	Professional Elective Course-3 (Choose any one)																					
		CAD/CAM/CIM	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Modeling and Simulation	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Dynamic System Modeling and Analysis	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
6	Professional Elective Course-4 (Choose any one)																					
		Automobile Engineering	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Design of Machine Elements	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Additive Manufacturing	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
	Total			15	10	0	375	20	14	--	--	50	50	200	300	300	500	250	450			

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HOD:_____

Dean : _____

Pls. Note :-Any approval/change should be helighlighted in gray as per academic councils meeting, dated _____

SVKM's NMIMS
School Name: Mukesh Patel School of Technology Management & Engineering
Teaching Scheme for Academic Year: 2021-22

Name of the Programme: B. Tech. Mechatronics Engineering

Semester: VII

Sr. No.	Module / Subject Code	Name of the Module	Theor y Hours per week	Practi cals Hours per week	Tutori als Hours per week	Total no. of hours for the subject (In term)	Credit /s	Duration of Examination (Hrs)		Mode of Exam	Examination Scheme (Weightage)								Templa te Codes	GR applica ble (Yes / No)	R e m a r k	
								Term End Examina tion	Only ICA		Distribution of ICA Marks					TEE		Total				
										Written / OffLine/On line/Compute r based / Practical/Viva /Jury/ Presentation	Test I	Test II	Term work *	Total Mark s	Scaled to (Marks)	Mark s (Ques tion Paper)	Scale d to (Mar ks)	Scaled Marks (ICA+ TEE)				Weghtage %
Semester - VII																						
1		Mechatronics System Design	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
2		Project Phase-I	0	8	0	120	4	--	Only ICA	--	0	0	100	100	100	-	-	100	100	7032	No	
3		Technical Internship Programme (Min. 6 weeks in vacation)	0	0	0	0	4	--	Only ICA	--	0	0	100	100	100	-	-	100	100	7032	No	
4	Professional Elective Course-5 (Choose any one)																					
		Digital Signal & Image Processing	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Microelectromechanical Systems	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Automotive Electronics	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
5	Professional Elective Course-6 (Choose any one)																					
		Industrial Engineering and Quality Management	3	0	2	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Fluid Power Automation	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Product Design and Development	3	0	2	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
6	Open Elective Course-1																					
		Industrial Robotics and Control	2	2	0	60	3	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Human Machine Interface & Data Acquisition	2	2	0	60	3	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
Total			11	14	2	405	23	12	--	--	40	40	320	400	400	400	200	600				

Name of the Programme: B. Tech. Mechatronics Engineering																						
Semester: VIII																						
Sr. No.	Module / Subject Code	Name of the Module	Theor y Hours per week	Practi cals Hours per week	Tutor ials Hours per week	Total no. of hours for the subject (In term)	Credit /s	Duration of Examination (Hrs)		Mode of Exam	Examination Scheme (Weightage)								Templa te Codes	GR applica ble (Yes / No)	R e m a r k	
								Term End Examina tion	Only ICA		Distribution of ICA Marks					TEE		Total				
										Test I	Test II	Term work *	Total Mark s	Scaled to (Marks)	Mark s (Ques tion Paper)	Scale d to (Mar ks)	Scaled Marks (ICA+ TEE)	Weig htag e %				
Semester - VIII																						
1		Robotics System Design	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
2		Project Phase-II	0	12	0	180	6	--	Only ICA	--	0	0	100	100	100	0	0	100	100	7032	No	
3	Professional Elective Course-7 (Choose any one)																					
		Virtual Instrumentation	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Advanced Microcontroller and Embedded Systems	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Artificial Intelligence and Machine Learning	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
		Bio-Mimicry	3	2	0	75	4	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
4	Open Elective Course-2																					
		Elements of Automation	2	2	0	60	3	3	--	Written	10	10	30	50	50	100	50	100	100	7031	Yes	
	Total		8	18	0	390	17	9	--	--	30	30	190	250	250	300	150	400				

*Term Work = Viva / Presentations/ Journals/ assignments/ quizzes / MCQs/Business plans/Role plans etc.

Pls. Note :-Any approval/change should be helighlighted in gray as per academic councils meeting, dated _____

HOD:_____

Dean : _____