

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI Scheme of Teaching and Examination – 2018 - 19 M.Tech IN MECHATRONICS (MTR) Outcome Based Education(OBE) and Choice Based Credit System (CBCS)										
I SEMESTER										
Sl. No	Course	Course Code	Course Title	Teaching Hours /Week		Examination			Credits	
				Theory	Practical/ Field work/ Assignment	Duration in hours	CIE Marks	SEE Marks		Total Marks
1	PCC	18MTR11	Mathematics	04	--	03	40	60	100	4
2	PCC	18MTR12	Fluid Power Automation	04	--	03	40	60	100	4
3	PCC	18MTR13	Advanced Control Systems	04	--	03	40	60	100	4
4	PCC	18MTR14	Mechatronics System Design	04	--	03	40	60	100	4
5	PEC	18MTR15	Sensor and Signal Conditioning	04	--	03	40	60	100	4
6	PCC	18MTRL16	Fluid Power Automation Lab	-	04	03	40	60	100	2
7	PCC	18RMI17	Research Methodology and IPR	02	--	03	40	60	100	2
TOTAL				22	04	21	280	420	700	24
Note: PCC: Professional core, PEC: Professional Elective.										
Internship: All the students have to undergo mandatory internship of 6 weeks during the vacation of I and II semesters and /or II and III semesters. A University examination shall be conducted during III semester and the prescribed credit shall be counted for the same semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take-up/complete the internship shall be declared as failed and have to complete during the subsequent University examination after satisfying the internship requirements.										

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II SEMESTER										
Sl. No	Course	Course Code	Course Title	Teaching Hours /Week		Examination				Credits
				Theory	Practical/ Field work/ Assignment	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	PCC	18MTR21	Automotive Electronics	04	--	03	40	60	100	4
2	PCC	18 MTR22	Micro and Smart Systems	04	--	03	40	60	100	4
3	PCC	18 MTR23	Safety and Security of Mechatronics systems	04	--	03	40	60	100	4
4	PEC	18 MTR24X	Professional elective 1	04	--	03	40	60	100	4
5	PEC	18 MTR25X	Professional elective 2	04	--	03	40	60	100	4
6	PCC	18 MTRL26	Advanced Control System Lab	--	04	03	40	60	100	2
7	PCC	18 MTR27	Technical Seminar	--	02	--	100	--	100	2
TOTAL				20	06	18	340	360	700	24
Note: PCC: Professional core, PEC: Professional Elective.										
Professional Elective 1				Professional Elective 2						
Course Code under 18MTR24X		Course title		Course Code under 18MTR25X		Course title				
18 MTR241		Industrial Automation		18 MTR251		Programmable Logic Controller				
18 MTR242		Finite Element Methods		18 MTR252		Reliability and Failure Analysis				
18 MT 243		Smart Materials and Structures		18 MTR253		Vibration Analysis				
Note:										
<p>1. Technical Seminar: CIE marks shall be awarded by a committee comprising of HoD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. Participation in the seminar by all postgraduate students of the same and other semesters of the programme shall be mandatory. The CIE marks awarded for Technical Seminar, shall be based on the evaluation of Seminar Report, Presentation skill and Question and Answer session in the ratio 50:25:25.</p> <p>2. Internship: All the students shall have to undergo mandatory internship of 6 weeks during the vacation of I and II semesters and /or II and III semesters. A University examination shall be conducted during III semester and the prescribed credit shall be counted in the same semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take-up/complete the internship shall be declared as failed and have to complete during the subsequent University examination after satisfying the internship requirements.</p>										

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III SEMESTER										
Sl. No	Course	Course Code	Course Title	Teaching Hours /Week		Examination			Credits	
				Theory	Practical/ Field work/ Assignment	Duration in hours	CIE Marks	SEE Marks		Total Marks
1	PCC	18MTR31	Artificial Intelligence and Neural Networks	04	--	03	40	60	100	4
2	PEC	18MTR32X	Professional elective 3	04	--	03	40	60	100	4
3	PEC	18MTR33X	Professional elective 4	04	--	03	40	60	100	4
4	Project	18MTR34	Evaluation of Project phase -1	--	02	--	100	--	100	2
5	Intenship	18MTRI35	Internship	(Completed during the intervening vacation of I and II semesters and /or II and III semesters.)		03	40	60	100	6
TOTAL				12	02	12	260	240	500	20
Note: PCC: Professional core, PEC: Professional Elective.										
Professional elective 3					Professional elective 4					
Course Code under 18MTR32X		Course title			Course Code under 18MTR33X		Course title			
18MTR321		Digital Image Processing & Machine Vision			18MTR331		Robotics Engineering			
18MTR322		Embedded Systems with Advanced Microcontroller			18MTR332		Micromachining			
18MTR323		Simulation Modelling and Analysis			18MTR333		Product Design			
Note:										
<p>1. Project Phase-1: Students in consultation with the guide/co-guide if any, shall pursue literature survey and complete the preliminary requirements of selected Project work. Each student shall prepare relevant introductory project document, and present a seminar. CIE marks shall be awarded by a committee comprising of HoD as Chairman, Guide/co-guide if any, and a senior faculty of the department. The CIE marks awarded for project work phase -1, shall be based on the evaluation of Project Report, Project Presentation skill and Question and Answer session in the ratio 50:25:25.</p> <p>SEE (University examination) shall be as per the University norms.</p> <p>2. Internship: Those, who have not pursued /completed the internship shall be declared as failed and have to complete during subsequent University examinations after satisfying the internship requirements.</p> <p>Internship SEE (University examination) shall be as per the University norms.</p>										

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IV SEMESTER										
Sl. No	Course	Course Code	Course Title	Teaching Hours /Week		Examination			Credits	
				Theory	Practical/ Field work/ Assignment	Duration in hours	CIE Marks	SEE Marks Viva voce		Total Marks
1	Project	18MTRX41	Project work phase -2	--	04	03	40	60	100	20
TOTAL				--	04	03	40	60	100	20
<p>Note: 1. Project Phase-2: CIE marks shall be awarded by a committee comprising of HoD as Chairman, Guide/co-guide, if any, and a Senior faculty of the department. The CIE marks awarded for project work phase -2, shall be based on the evaluation of Project Report subjected to plagiarism check, Project Presentation skill and Question and Answer session in the ratio 50:25:25. SEE shall be at the end of IV semester. Project work evaluation and Viva-Voce examination (SEE), after satisfying the plagiarism check, shall be as per the University norms.</p>										

