



BRAINWARE UNIVERSITY
SCHOOL OF ENGINEERING
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
M.TECH IN ROBOTICS & AUTOMATION 2022

SEMESTER – I

Course Code	Course Name	Course Type	Hours per week			Credit(s)	Total Marks
			L	T	P		
HSMC-MIRA101	Research Methodology and IPR	HSMC	3	0	0	3	100
PCC-MIRA101	Fundamental of Robotics: Robot Installation and Economics	PC	3	0	0	3	100
PCC-MIRA102	Advanced Control System in Robotics	PC	3	0	0	3	100
PEC-MIRA101	Programme Elective I: A. Artificial Intelligence for Robotics B. Embedded System Application for Robotics	PE	3	0	0	3	100
PEC-MIRA102	Programme Elective II: A. Mobile and Medical Robotics B. Electronics in Robotic Technology	PE	3	0	0	3	100
PCC-MIRA191	Programming Laboratory for Robotics	PC	0	0	4	2	100
PCC-MIRA192	Robot Design Laboratory	PC	0	0	4	2	100
TOTAL						19	700
AU-MIRA1	Constitution of India	AU	2	0	0	0	0

Total Hours: 25



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SEMESTER – II

Course Code	Course Name	Course Type	Hours per week			Credit(s)	Total Marks
			L	T	P		
PCC-MIRA201	Measurement and Sensor for Robotics	PC	3	0	0	3	100
PCC-MIRA202	Image Processing and Robotic Vision	PC	3	0	0	3	100
PEC-MIRA201	Programme Elective III: A. Machine Learning in Robotics B. Product Design and Development	PE	3	0	0	3	100
OEC-MIRA201	Open Elective: A. Mechatronics System Design B. Industrial Internet of Things	OE	3	0	0	3	100
PCC-MIRA291	Robotics and Automation Laboratory	PC	0	0	4	2	100
PROJ-MIRA281	Term paper leading to Dissertation	PR	-----			3	100
TOTAL						17	600
AU-MIRA2	Value Education	AU	2	0	0	0	0

Total Hours: 18



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SEMESTER – III

Course Code	Course Name	Course Type	Hours per week			Credit(s)	Total Marks
			L	T	P		
PCC-MIRA301	Industrial Automation	PC	3	0	0	3	100
PEC-MIRA301	Programme Elective IV: A. Signal Processing in Mechatronic System B. Wireless Sensor Network in Automation	PE	3	0	0	3	100
PEC-MIRA302	Programme Elective V: A. Industry 4.0 B. Micro and Nano Robotics C. Humanoid Robots	PE	3	0	0	3	100
PROJ-MIRA381	Dissertation Phase – I	PR	-----			10	100
TOTAL						19	400

Total Hours: 09

SEMESTER – IV

Course Code	Course Name	Course Type	Hours per week			Credit(s)	Total Marks
			L	T	P		
PROJ-MIRA481	Dissertation Phase – II	PR	-----			20	100
TOTAL						20	100

Total Credits: 75

Total Marks: 1800



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Semester	Course Category					Total Credit	Total Marks	Total Hours per week
	HSMC	PC	PE	OE	PR			
I	3	10	6	0	0	19	700	25
II	0	8	3	3	3	17	600	18
III	0	3	6	0	10	19	400	9
IV					20	20	100	0
Total	3	21	15	3	33	75	1800	
Percentage	4.00%	28.00%	20.00%	4.00%	44.00%			