Savitribai Phule Pune University

Faculty of Science & Technology

Syllabus Structure

Master of Engineering

(Robotics and Automation)

(2020 Course)

(with effect from June 2020)

Savitribai Phule Pune University, Pune
Master of Engineering (Robotics and Automation) (2020 Course)
(with effect from A.Y. 2020-21)

Course Code	Course	Teaching Scheme (Hrs./Week)		Examination Scheme and Marks					Credit Scheme		
		Theory	Practical	In-Sem	End-Sem	TW	OR/PR	Total	TH	TW	PR
Semester I											
511501	Computational Mathematics	03		50	50			100	03		
511502	Robot Control System	03		50	50			100	03		
511503	Robotics Based Industrial Automation	03		50	50			100	03		
511504	Research Methodology	03		50	50			100	03		
511505	Elective I	04		50	50			100	04		
511506	Laboratory Proficiency I		08			50	50	100		02	02
	Total	16	08	250	250	50	50	600	16	02	02
	Total Credit								**20**		
	Non Credit Course I								Grade		

Elective I

511505-A	Mechatronics Systems and Applications	511505-B	Instrumentation and Sensors
511505-C	Flexible manufacturing systems	511505-D	Pneumatic and Hydraulic Control
511505-E	Open Elective		

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		Theory	Practical	In-Sem	End-Sem	TW	OR/PR	Total	TH	TW	PR
Semester II											
511507	Robot Programming	03		50	50			100	03		
511508	Advanced Robot kinematics and Dynamics	03		50	50			100	03		
511509	Robot vision system	03		50	50			100	03		
511510	Elective II	04		50	50			100	04		
511512	Mini project with Seminar I		03			50	50	100		01	02
511513	Laboratory Proficiency II		08			50	50	100		02	02
	Total	13	11	200	200	100	100	600	13	03	04
	Total Credit								**20**		
	Non Credit Course II								Grade		

Elective II

511510-A	Service Robots	511510-B	Signal Processing
511510-C	Wireless Networks	511510-D	Computer Integrated Manufacturing
511510-E	Open Elective		

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Semester III

Course Code	Course	Teaching Scheme (Hrs./Week)		Examination Scheme and Marks					Credit Scheme		
		Theory	Practical	In-Sem	End-Sem	TW	OR/PR	Total	TH	TW	PR
611501	Artificial Intelligence in Robotics	03		50	50			100	03		
611502	Soft Computing in Robotics	03		50	50			100	03		
611503	Elective III	04		50	50			100	04		
611504	Industry Internship –I/In-house research project I		03			50	50	100		01	02
611505	Dissertation Stage I		08			50	50	100		04	04
	Total	10	11	150	150	100	100	600	10	05	06
	Total Credit								21		
	Non Credit Course III								Grade		

Elective III

611503-A	Programming and Data Structure	611503-B	Simulation and Modelling
611503-C	MEMS and Microsystems	611503-D	Mobile and Autonomous Robots
611503-E	Open Elective		

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Semester IV

Course Code	Course	Teaching Scheme (Hrs./Week)		Examination Scheme and Marks					Credit Scheme		
		Theory	Practical	In-Sem	End-Sem	TW	OR/PR	Total	TH	TW	PR
611504	Industry Internship –II/In-house research project II	--	03			50	50	100		01	02
611505	Dissertation Stage II	--	18			150	50	200		08	10
	Total	--	21			200	100	300		09	12
	Total Credit								21		

(Dr.K.N.Nandurkar)
Chairman BOS (Production & Industrial Engineering)