



**Second Year (Lateral Entry) Teaching Scheme**

**Admission Year 2026-27**

**Bachelor of Technology (Lateral Entry)  
Robotics and Artificial Intelligence**

**Faculty of Engineering & Technology**

**Parul University**

**Vadodara, Gujarat, India**

### Semester - 3

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
03016003PC01	Fundamental of Robotics	3	3	-	-	20	-	20	60	-	40		100
03016003PC02	Fundamental of Robotics Laboratory	1	-	2	-	-	20	-	-	30		25	50
03010503PC01	Data Structures & Algorithms	3	3	-	-	20	-	20	60	-	40		100
03010503PC02	Data Structures & Algorithms Laboratory	2	-	4	-	-	20	-	-	30		25	50
03016003PC03	Fundamentals of Object-Oriented Programming	3	3	-	-	20	-	20	60	-	40		100
03016003PC04	Fundamentals of Object-Oriented Programming Laboratory	1	-	2	-	-	20	-	-	30		25	50
	Basic Science Courses (BSC - IV) (2025-26)	3	3	-	-	20	-	20	60	-	40		100
	Engineering Science Course (ESC)-V (2025-26)	4	3	2	-	20	20	20	60	30	40	25	150
	Humanities and Social Science, including Management Course (HSMC)-III (2025-26)	2	1	2	-	40	20	-	60	30	40	25	150
	Mandatory Course (MNC)-III (2025-26)	0	1	-	-	20	-	20	60	-	40		100
	<b>Total</b>	<b>22</b>	<b>17</b>	<b>12</b>									<b>950</b>

### Semester - 3 : Basic Science Course (BSC)-IV (2025-26)

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
03019103BS01	Discrete Mathematics	3	3	-	-	20	-	20	60	-	40		100

**Semester - 3 : Engineering Science Course (ESC)-V (2025-26)**

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
03016003ES01	Control Theory	3	3	-	-	20	-	20	60	-	40		100
03016003ES02	Control Theory Laboratory	1	-	2	-	-	20	-	-	30		25	50

**Semester - 3 : Humanities and Social Science, including Management Course (HSMC)-III (2025-26)**

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
03010003HM01	Functional Communication Skills	2	1	2	-	40	20	-	60	30	40	25	150

**Semester - 3 : Mandatory Course (MNC)-III (2025-26)**

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
17013003MC01	Indian Consitution	0	1	-	-	20	-	20	60	-	40		100
	Introduction to Sustainability, Climate Change and ESG	0	1	-	-	20	-	20	60	-	40		100

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical  
 Theory Passing % : 40 Practical Passing % : 50

### Semester - 4

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
03014602PC01	Python Programming	3	3	-	-	20	-	20	60	-	40		100
03014602PC02	Python Programming Laboratory	1	-	2	-	-	20	-	-	30		25	50
03016004PC01	Robot Kinematics	3	3	-	-	20	-	20	60	-	40		100
03016004PC02	Robot Kinematics Laboratory	1	-	2	-	-	20	-	-	30		25	50
	Professional Elective Courses (PECs - I) (2025-26)	4	3	2	-	20	20	20	60	30	40	25	150
	Basic Science Course (BSC)-V (2025-26)	3	3	-	-	20	-	20	60	-	40		100
	Humanities and Social Science, including Management Course (HSMC)-IV (2025-26)	1	-	2	-	-	20	-	-	30		25	50
	Mandatory Course (MNC)-IV (2025-26)	0	1	-	-	-	-	50	-	-		25	50
	Multidisciplinary Open Professional Electives Course (MOPEC)-II (2025-26)	3	3	-	-	20	-	20	60	-	40		100
	<b>Total</b>	<b>19</b>	<b>16</b>	<b>8</b>									<b>750</b>

### Semester - 4 : Professional Elective Courses (PECs – I) (2025-26)

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
03016004PE01	Communication Protocols	3	3	-	-	20	-	20	60	-	40		100
03016004PE02	Communication Protocols Laboratory	1	-	2	-	-	20	-	-	30		25	50
03010504PE03	PROGRAMMING IN PYTHON WITH FULL STACK DEVELOPMENT	3	3	-	-	20	-	20	60	-	40		100
03010504PE04	PROGRAMMING IN PYTHON WITH FULL STACK DEVELOPMENT Laboratory	1	-	2	-	-	20	-	-	30		25	50

03012404PC01	Artificial Intelligence	3	3	-	-	20	-	20	60	-	40		100
03012404PC02	Artificial Intelligence Laboratory	1	-	2	-	-	20	-	-	30		25	50
03010504PE05	Azure Fundamentals	3	3	-	-	20	-	20	60	-	40		100
03010504PE06	Azure Fundamentals Laboratory	1	-	2	-	-	20	-	-	30		25	50

**Semester - 4 : Basic Science Course (BSC)-IV (2025-26)**

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
03019104BS01	Probability, Statistics and Numerical Methods	3	3	-	-	20	-	20	60	-	40		100

**Semester - 4 : Humanities and Social Science, including Management Course (HSMC)-IV (2025-26)**

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
03010004HM01	Professional Soft Skills - I	1	-	2	-	-	20	-	-	30		25	50

**Semester - 4 : Mandatory Course (MNC)-IV (2025-26)**

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
03010004MC01	NCC	0	1	-	-	-	-	50	-	-		25	50
03010004MC02	NSS	0	1	-	-	-	-	50	-	-		25	50
03010004MC03	Sports	0	1	-	-	-	-	50	-	-		25	50
03M10004MC01	Yoga and Positive Psychology for Managing Career and Life	0	1	-	-	-	-	50	-	-		25	50
03010004MC04	Mindfulness and Digital Wellness	0	1	-	-	-	-	50	-	-		25	50
03M10004MC02	The Science of Happiness and Wellbeing	0	1	-	-	-	-	50	-	-		25	50

**Semester - 4 : Multidisciplinary Open Professional Electives Course (MOPEC)-II (2025-26)**

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Mark s
Code	Subject	Credi t	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
15M10504UE01	Emotional Intelligence	3	3	-	-	20	-	20	60	-	40		100
15M10504UE02	Introduction to Cognitive Psychology	3	3	-	-	20	-	20	60	-	40		100
15M10504UE03	One Health	3	3	-	-	20	-	20	60	-	40		100
19M10004UE01	Psychiatry: An overview	3	3	-	-	20	-	20	60	-	40		100
19M10004UE02	Philosophy and Critical Thinking	3	3	-	-	20	-	20	60	-	40		100

**Lect** - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical  
**Theory Passing % : 40 Practical Passing % : 50**