SARDAR PATEL UNIVERSITY
NEP Structure B.Sc. Semester: VII
(Under Choice Based Credit Scheme)
Syllabus with Effect from: 2026 (Honors Without Research & With Research)

Course Type	Course Code	Course Title	Teaching-Learning Scheme		Credits	Assessment Scheme & Marks				
			L-P-T	Total Notional Hours		Internal Assessment			External Assessment	Total Marks
						FA	SA	Total		
Major Course (Any One Subject)										
Chemistry	US07HMACHE01	Topics in Organic Chemistry-I	4-0-0	120	4	30	20	50	50	100
	US07HMACHE02	Topic in Physical Chemistry-I	4-0-0	120	4	30	20	50	50	100
	US07HMACHE03	Organic and Physical Practical	0-8-0	120	4	30	20	50	50	100
Microbiology	US07HMAMIC01	Molecular Biology	4-0-0	120	4	30	20	50	50	100
	US07HMAMIC02	Microbial Physiology	4-0-0	120	4	30	20	50	50	100
	US07HMAMIC03	Microbiology Practical VII	0-8-0	120	4	30	20	50	50	100
Zoology	US07HMAZOO01	Cell Biology	4-0-0	120	4	30	20	50	50	100
	US07HMAZOO02	Principles of Immunology	4-0-0	120	4	30	20	50	50	100
	US07HMAZOO03	Zoology Practical	0-8-0	120	4	30	20	50	50	100
Biotechnology	US07HMABTE01	Molecular Biology II	4-0-0	120	4	30	20	50	50	100
	US07HMABTE02	Biochemistry and metabolism	4-0-0	120	4	30	20	50	50	100
	US07HMABTE03	Biotechnology Practical (Major)	0-8-0	120	4	30	20	50	50	100
Botany	US07HMABOT01	Biology and Diversity of Lower Plants	4-0-0	120	4	30	20	50	50	100
	US07HMABOT02	Biology and Diversity of Seed Plants	4-0-0	120	4	30	20	50	50	100
	US07HMABOT03	Botany Practical	0-8-0	120	4	30	20	50	50	100
Industrial Chemistry	US07HMAICH01	Selected Topics in Industrial Organic Chemistry-I	4-0-0	120	4	30	20	50	50	100
	US07HMAICH02	Applied Unit Operations and Mass Transfer	4-0-0	120	4	30	20	50	50	100
	US07HMAICH03	Industrial Chemistry – Practical	0-8-0	120	4	30	20	50	50	100

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Computer Science	US07HMACSC01	Computer Networks	4-0-0	120	4	30	20	50	50	100
	US07HMACSC02	Visual Programming Through VB.NET	4-0-0	120	4	30	20	50	50	100
	US07HMACSC03	Practical	0-8-0	120	4	30	20	50	50	100
Physics	US07HMAPHY01	Mathematical Methods	4-0-0	120	4	30	20	50	50	100
	US07HMAPHY02	Thermodynamics and Statistical Mechanics	4-0-0	120	4	30	20	50	50	100
	US07HMAPHY03	Physics Practical	0-8-0	120	4	30	20	50	50	100
Biochemistry	US07HMABIC01	Molecular Biochemistry	4-0-0	120	4	30	20	50	50	100
	US07HMABIC02	Cell Signaling and Basic Physiology	4-0-0	120	4	30	20	50	50	100
	US07HMABIC03	Biochemistry Practical	0-8-0	120	4	30	20	50	50	100
Mathematics	US07HMAMTH01	Complex Analysis	4-0-0	120	4	30	20	50	50	100
	US07HMAMTH02	Real Analysis-3	4-0-0	120	4	30	20	50	50	100
	US07HMAMTH03	Problems and Exercises in Complex Analysis & Real Analysis-3	0-8-0	120	4	30	20	50	50	100
Electronics and Communication	US07MAELC01	Signal & System	4-0-0	120	4	30	20	50	50	100
	US07MAELC02	8 Bit Microcontroller and Applications	4-0-0	120	4	30	20	50	50	100
	US07MAELC03	Electronics and Communication Practical	0-8-0	120	4	30	20	50	50	100

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Minor Course (Any One Subject)										
Chemistry (Any Two)	US07HMICHE01	Topics in Polymer Science	2-0-0	60	2	15	10	25	25	50
	US07HMICHE02	Applied and Industrial Chemistry	2-0-0	60	2	15	10	25	25	50
	US07HMICHE03	Polymer Chemistry Practical	0-4-0	60	2	15	10	25	25	50
	US07HMICHE04	Research Methodology	2-0-0	60	2	15	10	25	25	50
Microbiology	US07HMIMIC01	Good Laboratory Practices and Good Manufacturing Practices	2-0-0	60	2	15	10	25	25	50
	US07HMIMIC02	Microbiology Practical in GLP and GMP	0-4-0	60	2	15	10	25	25	50
	US07HMIICH02	Organizational Behavior and Human Resource Management Practical (Case Studies)	0-4-0	60	2	15	10	25	25	50
Industrial Chemistry	US07HMIICH01	Organizational Behavior and Human Resource Management	2-0-0	60	2	15	10	25	25	50
Zoology	US07HMIZOO01	Animal Cell Biology and Human Physiology	2-0-0	60	2	15	10	25	25	50
	US07HMIZOO02	Zoology Practical	0-4-0	60	2	15	10	25	25	50
Biotechnology	US07HMIBTE01	Good Laboratory Practices and Good Manufacturing Practices	2-0-0	60	2	15	10	25	25	50
	US07HMIBTE02	Biotechnology Practical (Minor)	0-4-0	60	2	15	10	25	25	50
Botany	US07HMIBOT01	EthnobPotnay	2-0-0	60	2	15	10	25	25	50
	US07HMIBOT02	Botany Practical	0-4-0	60	2	15	10	25	25	50

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Computer Science	US07HMICSC01	Computer Oriented Numerical and Statistical Methods	2-0-0	60	2	15	10	25	25	50
	US07HMICSC02	Practical	0-4-0	60	2	15	10	25	25	50
Physics	US07HMIPHY01	Defects in Solids and Diffusion Process	2-0-0	60	2	15	10	25	25	50
	US07HMIPHY02	Physics Practical	0-4-0	60	2	15	10	25	25	50
Biochemistry	US07HMIBIC01	Cell organelles and transport	2-0-0	60	2	15	10	25	25	50
	US07HMIBIC02	Biochemistry Practical	0-4-0	60	2	15	10	25	25	50

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Mathematics (Any Two)	US07HMIMTH01	Numerical Analysis-1	2-0-0	60	2	15	10	25	25	50
	US07HMIMTH02	Problems and Exercises in Numerical Analysis-1	0-4-0	60	2	15	10	25	25	50
	US07HMIMTH03	Ordinary Differential Equations-1	2-0-0	60	2	15	10	25	25	50
	US07HMIMTH04	Problems and Exercises in Ordinary Differential Equations-1	0-4-0	60	2	15	10	25	25	50
	US07HMIMTH05	Partial Differential Equations-1	2-0-0	60	2	15	10	25	25	50
	US07HMIMTH06	Problems and Exercises in Partial Differential Equation-1	0-4-0	60	2	15	10	25	25	50
	US07HMIMTH07	Numerical Analysis-2	2-0-0	60	2	15	10	25	25	50
	US07HMIMTH08	Problems and Exercises in Numerical Analysis-2	0-4-0	60	2	15	10	25	25	50
	US07HMIMTH09	Ordinary Differential Equations-2	2-0-0	60	2	15	10	25	25	50
	US07HMIMTH10	Problems and Exercises in Ordinary Differential Equations-2	0-4-0	60	2	15	10	25	25	50
	US07HMIMTH11	Partial Differential Equations-2	2-0-0	60	2	15	10	25	25	50
	US07HMIMTH12	Problems and Exercises in Partial Differential Equations-2	0-4-0	60	2	15	10	25	25	50
Statistics	US07HMISTA01	Sample Survey	2-0-0	60	2	15	10	25	25	50
	US07HMISTA02	Statistics Practical	0-4-0	60	2	15	10	25	25	50
Electronics and Communication	US07MIELC01	Analog Interface Electronics	2-0-0	60	2	15	10	25	25	50
	US07MIELC02	Electronics and Communication Practical	0-4-0	60	2	15	10	25	25	50

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Internship/ Dissertation/ On Job Training/Research Project (Minimum 6 credits)										
Chemistry	US07HMACHE04	On the Job Training	OJT	180	6	3(Max)		75	75	150
		OR								
	US07HMACHE05	Topics in Inorganic Chemistry-I	4-0-0	120	4	30	20	50	50	100
	US07HSECHE01	Inorganic Chemistry Practical	0-4-0	60	2	15	10	25	25	50
	US07HRPCHE01	* Research Project (RP)	RP	180	6	3(Max)		75	75	150
Microbiology	US07HMAMIC04	On the Job Training	OJT	180	6	3(Max)		75	75	150
		OR								
	US07HMAMIC05	Molecular Cell Biology	4-0-0	120	4	30	20	50	50	100
	US07HSEMIC01	Research Methodology I	0-2-0	60	2	15	10	25	25	50
	US07HRPMIC01	* Research Project (RP)	RP	180	6	3(Max)		75	75	150
Zoology	US07HMAZOO04	On the Job Training	OJT	180	6	3(Max)		75	75	150
		OR								
	US07HMAZOO05	Research Methodology	4-0-0	120	4	30	20	50	50	100
	US07HSEZOO01	Principles of Ecology	0-2-0	60	2	15	10	25	50	50
	US07HRPZOO01	* Research Project (RP)	RP	180	6	3(Max)		75	75	150
Biotechnology	US07HOJBTE04	On the Job Training	OJT	180	6	3(Max)		75	75	150
		OR								
	US07HMABTE05	Molecular cell Biology	4-0-0	120	4	30	20	50	50	100
	US07HSEBTE01	Research Methodology I	0-2-0	60	2	15	10	25	50	50
	US07HRPBTE01	* Research Project (RP)	RP	180	6	3(Max)		75	75	150
Botany	US07HMABOT04	On Job Training	OJT	180	6	3(Max)		75	75	150
		OR								
	US07HMABOT05	Botanical Instrumentation & Analytical Techniques-1	4-0-0	120	4	30	20	50	50	100
	US07HSEBOT01	Botany Practical	0-2-0	60	2	15	10	25	25	50
	US07HRPBOT01	* Research Project (RP)	RP	180	6	3(Max)		75	75	150

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Computer Science	US07HMACSC04	On Job Training	P	180	6	3(Max)		75	75	150
	US07HRPCSC01	* Research Project (RP)	RP	180	6	3(Max)		75	75	150
Physics	US07HMAPHY04	On-the-job Training (OJT)	P	180	6	3(Max)		75	75	150
		OR								
	US07HMAPHY05	Electronic Communication	4-0-0	120	4	30	20	50	50	100
	US07HSEPHY01	Integrated Circuit Fabrication Technology	2-0-0	60	2	15	10	25	25	50
	US07HRPPHY01	* Research Project (RP)	RP	180	6	3(Max)		75	75	150
Biochemistry	US07HMABIC04	On-the-job Training (OJT)	P	180	6	3(Max)		75	75	150
		OR								
	US07HMABIC05	Fundamentals of Endocrinology	4-0-0	120	4	30	20	50	50	100
	US07HSEBIC01	Research Methodology I	2-0-0	60	2	15	10	25	25	50
	US07HRPBIC01	* Research Project (RP)	RP	180	6	3(Max)		75	75	150
Electronics and Communication	US07HMAELC04	On Job Training	P	180	6	3(Max)		75	75	150
	US07HRPELC01	* Research Project (RP)	RP	180	6	3(Max)		75	75	150

*** Indicate This student has selected a research project.**