

**SARDAR PATEL UNIVERSITY**  
**NEP Structure B.Sc. Semester: VI**  
**(Under Choice Based Credit Scheme)**  
**Syllabus with Effect from: 2025**

Course Type	Course Code	Name of Course	T / P	Credit	Contact Hours Per Week	Exam Duration in hrs	Component of Marks		
							Internal	External	Total
<b>Ability Enhancement Course</b>									
	US06AEENG01	Functional English	P	2	2	2	25	25	50
<b>Major Course (Any One Subject)</b>									
<b>Chemistry</b>	US06MACHE01	Inorganic Chemistry	T	4	4	2:30	50	50	100
	US06MACHE02	Physical Chemistry	T	4	4	2:30	50	50	100
	US06MACHE03	Chemistry Practical	P	4	8	3	50	50	100
<b>Physics</b>	US06MAPHY01	Quantum Mechanics	T	4	4	2:30	50	50	100
	US06MAPHY02	Solid State Physics & Nuclear Physics	T	4	4	2:30	50	50	100
	US06MAPHY03	Physics Practical	P	4	8	3	50	50	100
<b>Zoology</b>	US06MAZOO01	Developmental Biology	T	4	4	2:30	50	50	100
	US06MAZOO02	Comparative Anatomy of Chordates	T	4	4	2:30	50	50	100
	US06MAZOO03	Zoology Practical	P	4	8	3	50	50	100
<b>Bio Chemistry</b>	US06MABIC01	Genetic Engineering	T	4	4	2:30	50	50	100
	US06MABIC02	Human Metabolism-II	T	4	4	2:30	50	50	100
	US06MABIC03	Biochemistry Practical	P	4	8	3	50	50	100
<b>Botany</b>	US06MABOT01	Plant Ecology and Phytogeography	T	4	4	2:30	50	50	100
	US06MABOT02	Angiosperm Plant Systematics	T	4	4	2:30	50	50	100
	US06MABOT03	Botany Practical	P	4	8	3	50	50	100
<b>Biotechnology</b>	US06MABTE01	Environmental Biotechnology	T	4	4	2:30	50	50	100
	US06MABTE02	Fermentation Technology	T	4	4	2:30	50	50	100
	US06MABTE03	Biotechnology Practical	P	4	8	3	50	50	100



Course Type	Course Code	Name of Course	T / P	Credit	Contact Hours Per Week	Exam Duration in hrs	Component of Marks		
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Microbiology	US06MAMIC01	Immunology and Medical Microbiology	T	4	4	2:30	50	50	100
	US06MAMIC02	Fermentation Technology	T	4	4	2:30	50	50	100
	US06MAMIC03	Microbiology Practical	P	4	8	3	50	50	100
Industrial Chemistry	US06MAICH01	Synthetic Dyes and Pharmaceuticals	T	4	4	2:30	50	50	100
	US06MAICH02	Process Control And Mass Transfer Operations	T	4	4	2:30	50	50	100
	US06MAICH03	Industrial Chemistry – Practical	P	4	8	3	50	50	100
Industrial Chemistry Vocational	US06MAICV01	Synthetic Dyes and Drugs	T	4	4	2:30	50	50	100
	US06MAICV02	Separation Techniques & Mass Transfer Operations	T	4	4	2:30	50	50	100
	US06MAICV03	Industrial Chemistry Vocational – Practical	P	4	8	3	50	50	100
Mathematics	US06MAMTH01	Real Analysis-2	T	4	4	2:30	50	50	100
	US06MAMTH02	Linear Algebra	T	4	4	2:30	50	50	100
	US06MAMTH03	Mathematical Algorithms with Python-2	P	4	8	3	50	50	100
Electronics and Communication	US06MAELC01	Digital Communication System	T	4	4	2:30	50	50	100
	US06MAELC02	Electronics Measuring Instruments	T	4	4	2:30	50	50	100
	US06MAELC03	Electronics and Communication Practical	P	4	8	3	50	50	100
Computer Science	US06MACSC01	Python Programming	T	4	4	2:30	50	50	100
	US06MACSC02	PHP Using MySql	T	4	4	2:30	50	50	100
	US06MACSC03	Practical	P	4	8	3	50	50	100
Electronics	US06MAELE01	8-Bit Microprocessor Programming & Applications-2	T	4	4	2:30	50	50	100
	US06MAELE02	Analog Communication	T	4	4	2:30	50	50	100
	US06MAELE03	Electronics Practicals	P	4	8	3	50	50	100



Course Type	Course Code	Name of Course	T / P	Credit	Contact Hours Per Week	Exam Duration in hrs	Component of Marks		
							Internal	External	Total
<b>Minor Subject (Any One Subject)</b>									
<b>Chemistry</b>	US06MICHE01	Organic Chemistry-II	T	2	2	1:30	25	25	50
	US06MICHE02	Chemistry Practical	P	2	4	2	25	25	50
		<b>OR</b>							
	US06MICHE03	Polymer Science	T	2	2	1:30	25	25	50
	US06MICHE04	Polymer Science - Practical	P	2	4	2	25	25	50
		<b>OR</b>							
	US06MICHE05	Industrial Management & Economics – II	T	2	2	1:30	25	25	50
	US06MICHE06	Industrial Management & Economics – II – Project work	P	2	4	2	25	25	50
<b>Physics</b>	US06MIPHY01	Spectroscopy	T	2	2	1:30	25	25	50
	US06MIPHY02	Physics Practical	P	2	4	2	25	25	50
<b>Zoology</b>	US06MIZOO01	Economic Zoology	T	2	2	1:30	25	25	50
	US06MIZOO02	Zoology Practical	P	2	4	2	25	25	50
<b>Biochemistry</b>	US06MIBIC01	Immunology	T	2	2	1:30	25	25	50
	US06MIBIC02	Biochemistry Practical	P	2	4	2	25	25	50
<b>Botany</b>	US06MIBOT01	Informatics and Statistics for Botany	T	2	2	1:30	25	25	50
	US06MIBOT02	Botany Practical	P	2	4	2	25	25	50
<b>Biotechnology</b>	US06MIBTE01	Bioinformatics	T	2	2	1:30	25	25	50
	US06MIBTE02	Biotechnology Practical	P	2	4	2	25	25	50
<b>Microbiology</b>	US06MIMIC01	Bio- technology in environment and Agriculture	T	2	2	1:30	25	25	50
	US06MIMIC02	Microbiology Practical	P	2	4	2	25	25	50
<b>Industrial Chemistry</b>	US06MIICH01	Polymer Technology	T	02	02	01:30	25	25	50
	US06MIICH02	Polymer Technology – Practical	P	02	04	02:00	25	25	50
	US06MIICH03	Business Organization & Management – II	T	02	02	01:30	25	25	50
	US06MIICH04	Business Organization & Management–II– Project Work	P	02	04	02:00	25	25	50
	US06MIICH05	Fundamentals Of Organic Chemistry	T	02	02	01:30	25	25	50
	US06MIICH06	Organic Preparation Practical	P	02	04	02:00	25	25	50
<b>Industrial Chemistry(Voc)</b>	US06MIICV01	Industrial Management	T	02	02	01:30	25	25	50
	US06MIICV02	Industrial Management – Project Work	P	02	04	02:00	25	25	50



Course Type	Course Code	Name of Course	T / P	Credit	Contact Hours Per Week	Exam Duration in hrs	Component of Marks		
							Internal	External	Total
Mathematics	US06MIMTH01	Numerical Analysis-2	T	2	2	1:30	25	25	50
	US06MIMTH02	Problems and Exercises in Numerical Analysis-2	P	2	4	2	25	25	50
		<b>OR</b>							
	US06MIMTH03	Ordinary Differential Equations-2	T	2	2	1:30	25	25	50
	US06MIMTH04	Problems and Exercises in Ordinary Differential Equations-2	P	2	4	2	25	25	50
		<b>OR</b>							
	US06MIMTH05	Partial Differential Equations-2	T	2	2	1:30	25	25	50
	US06MIMTH06	Problems and Exercises in Partial Differential Equations-2	P	2	4	2	25	25	50
		<b>OR</b>							
	US06MIMTH07	Partial Differential Equations-1	T	2	2	1:30	25	25	50
US06MIMTH08	Problems and Exercises in Partial Differential Equations-1	P	2	4	2	25	25	50	
Statistics	US06MISTA01	Probability Distributions	T	2	2	1:30	25	25	50
	US06MISTA02	Statistics Practicals	P	2	4	2	25	25	50
Computer Science	US06MICSC01	Advanced Web Development Technology using ASP.NET	T	2	2	1:30	25	25	50
	US06MICSC02	Practicals	P	2	4	2	25	25	50
Electronics	US06MIELE01	Digital Electronics – 2	T	2	2	1:30	25	25	50
	US06MIELE02	Electronics Practicals	P	2	4	2	25	25	50
		<b>OR</b>							
	US06MIELE03	8-Bit Microprocessor Programming - 2	T	2	2	1:30	25	25	50
	US06MIELE04	Electronics Practicals	P	2	4	2	25	25	50
		<b>OR</b>							
Electronics & Communication	US06MIELC01	Data Communication and Network	T	2	2	1:30	25	25	50
	US06MIELC02	Electronics and Communication Practical	P	2	4	2	25	25	50



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							Internal	External	Total
<b>Skill Enhancement Course (Any One Subject)</b>									
<b>Chemistry</b>	US06SECHE01	Internship	=	4			50	50	100
<b>Physics</b>	US06SEPHY01	Internship	=	4			50	50	100
<b>Biochemistry</b>	US06SEBIC01	Internship	=	4			50	50	100
<b>Botany</b>	US06SEBOT01	Internship	=	4			50	50	100
<b>Microbiology</b>	US06SEMIC01	Internship	=	4			50	50	100
<b>Biotechnology</b>	US06SEBTE01	Internship	=	4			50	50	100
<b>Zoology</b>	US06SEZOO01	Internship	=	4			50	50	100
<b>Electronics and Communication</b>	US06SEELC01	Internship	=	4			50	50	100
<b>Computer Science</b>	US06SECSC01	* Internship	=	4			50	50	100
<b>Electronics</b>	US06SEELC01	Internship	=	4			50	50	100
<b>Mathematics</b>	US06SEMTH01	Internship	=	4			50	50	100
<b>Ind. Chemistry</b>	US06SEICH01	*Internship	=	4			50	50	100
<b>Ind. Chemistry (Voc.)</b>	US06SEICV01	*Internship	=	4			50	50	100

