

**SARDAR PATEL UNIVERSITY**  
**NEP Structure B.Sc. Semester: III**  
**(Under Choice Based Credit Scheme)**  
**Syllabus with Effect from: 2024**

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>									
	US03AEENG01	Functional English	P	2	2	2	25	25	50
<b>Major Course (Any One Subject)</b>									
<b>Chemistry</b>	US03MACHE01	Inorganic Chemistry-I	T	4	4	2:30	50	50	100
	US03MACHE02	Physical Chemistry	T	4	4	2:30	50	50	100
	US03MACHE03	Chemistry Practical	P	4	8	3	50	50	100
<b>Physics</b>	US03MAPHY01	Optics	T	4	4	2:30	50	50	100
	US03MAPHY02	Basic Solid State Electronics	T	4	4	2:30	50	50	100
	US03MAPHY03	Physics Practical	P	4	8	3	50	50	100
<b>Zoology</b>	US03MAZOO01	Invertebrate & Economic Zoology	T	4	4	2:30	50	50	100
	US03MAZOO02	Physiology & Adaptation	T	4	4	2:30	50	50	100
	US03MAZOO03	Zoology Practical	P	4	8	3	50	50	100
<b>Bio Chemistry</b>	US03MABIC01	Biochemistry of Biomolecules	T	4	4	2:30	50	50	100
	US03MABIC02	Essentials of Clinical Biochemistry-I	T	4	4	2:30	50	50	100
	US03MABIC03	Biochemistry Practical	P	4	8	3	50	50	100
<b>Botany</b>	US03MABOT01	Economic Botany	T	4	4	2:30	50	50	100
	US03MABOT02	Plant Morphology and Taxonomy	T	4	4	2:30	50	50	100
	US03MABOT03	Botany Practical	P	4	8	3	50	50	100



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Biotechnology	US03MABTE01	Molecular Biology (Prokaryotes)	T	4	4	2:30	50	50	100
	US03MABTE02	Fundamentals of Microbiology	T	4	4	2:30	50	50	100
	US03MABTE02	Biotechnology Practical	P	4	8	3	50	50	100
Microbiology	US03MAMIC01	Introduction to Microbial Physiology	T	4	4	2:30	50	50	100
	US03MAMIC02	Elements of Microbiology	T	4	4	2:30	50	50	100
	US03MAMIC03	Microbiology Practical	P	4	8	3	50	50	100
Industrial Chemistry	US03MAICH01	Chemical Process Principles & Engineering Materials	T	4	4	2:30	50	50	100
	US03MAICH02	Organic Chemistry	T	4	4	2:30	50	50	100
	US03MAICH03	Practical	P	4	8	3	50	50	100
Industrial Chemistry (Vocational)	US03MAICV01	Unit Processes in Organic Synthesis-I	T	4	4	2:30	50	50	100
	US03MAICV02	Introduction to Organic Chemistry	T	4	4	2:30	50	50	100
	US03MAICV03	Practical	P	4	8	3	50	50	100
Mathematics	US03MAMTH01	Ordinary Differential Equations	T	4	4	2:30	50	50	100
	US03MAMTH02	Multivariate Calculus	T	4	4	2:30	50	50	100
	US03MAMTH03	Problems and Exercises in Ordinary Differential Equation & Multi-Variate Calculus	P	4	8	3	50	50	100
Electronics and Communication	US03MAELC01	Electronics Devices and Circuits - II	T	4	4	2:30	50	50	100
	US03MAELC02	Analog Communication	T	4	4	2:30	50	50	100
	US03MAELC03	Practical	P	4	8	3	50	50	100
Computer Science	US03MACSC01	Fundamentals of Computer Programming Using C	T	4	4	2:30	50	50	100
	US03MACSC02	Web Application Development – I	T	4	4	2:30	50	50	100
	US03MACSC03	Practical Based on US03MACSC01 and US03MACSC02	P	4	8	3	50	50	100
Electronics	US03MAELE01	Transistor Circuits	T	4	4	2:30	50	50	100
	US03MAELE02	Digital Electronics-I	T	4	4	2:30	50	50	100
	US03MAELE03	Practical	P	4	8	3	50	50	100



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<b>Multi / Inter Disciplinary (Any One Subject)</b>									
<b>Chemistry</b>	US03IDCHE01	Inorganic Chemistry-II	T	2	2	1:30	25	25	50
	US03IDCHE02	Chemistry Practical-II	P	2	4	2	25	25	50
<b>Physics</b>	US03IDPHY01	Optical Physics	T	2	2	1:30	25	25	50
	US03IDPHY02	Physics Practical	P	2	4	2	25	25	50
<b>Zoology</b>	US03IDZOO01	Food & Nutrition	T	2	2	1:30	25	25	50
	US03IDZOO02	Zoology Practical	P	2	4	2	25	25	50
<b>Biochemistry</b>	US03IDBIC01	Fundamentals of Biomolecules	T	2	2	1:30	25	25	50
	US03IDBIC02	Biochemistry Practical	P	2	4	2	25	25	50
<b>Botany</b>	US03IDBOT01	Plants Diversity	T	2	2	1:30	25	25	50
	US03IDBOT02	Botany Practical	P	2	4	2	25	25	50
<b>Biotechnology</b>	US03IDBTE01	Basics of Microbiology	T	2	2	1:30	25	25	50
	US03IDBTE02	Biotechnology Practical	P	2	4	2	25	25	50
<b>Microbiology</b>	US03IDMIC01	Introduction to control of Microorganisms	T	2	2	1:30	25	25	50
	US03IDMIC02	Microbiology Practical	P	2	4	2	25	25	50
<b>Industrial Chemistry</b>	US03IDICH01	Engineering Materials	T	2	2	1:30	25	25	50
	US03IDICH02	Practical	P	2	4	2	25	25	50
<b>Industrial Chemistry (Voc.)</b>	US03IDICV01	Unit Processes	T	2	2	1:30	25	25	50
	US03IDICV02	Practical	P	2	4	2	25	25	50
<b>Mathematics</b>	US03IDMTH01	Graph Theory	T	2	2	1:30	25	25	50
	US03IDMTH02	Problems and Exercises in Graph Theory	P	2	4	2	25	25	50
		<b>OR</b>	P	2	4	2	25	25	50
	US03IDMTH03	Number Theory	T	2	2	1:30	25	25	50
	US03IDMTH04	Problems and Exercises in Number Theory	P	2	4	2	25	25	50
		<b>OR</b>							



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<b>Mathematics</b>	US03IDMTH05	Mechanics	T	2	2	1:30	25	25	50
	US03IDMTH06	Problems and Exercises in Mechanics	P	2	4	2	25	25	50
		<b>OR</b>							
	US03IDMTH07	Advanced Calculus	T	2	2	1:30	25	25	50
	US03IDMTH08	Problems and Exercises in Advanced Calculus	P	2	4	2	25	25	50
<b>Electronics &amp; Communication</b>	US03IDELC01	Electronics Devices and Circuits - II	T	2	2	1:30	25	25	50
	US03IDELC02	Practical	P	2	4	2	25	25	50
<b>Computer Science</b>	US03IDCSC01	Basics of Computer Programming Using C	T	2	2	1:30	25	25	50
	US03IDCSC02	Practical Based on US03IDCSC01	P	2	4	2	25	25	50
<b>Electronics</b>	US03IDELE01	Active Electronic Components	T	2	2	1:30	25	25	50
	US03IDELE02	Practicals	P	2	4	2	25	25	50
<b>Statistics</b>	US03IDSTA01	Index Numbers and Vital Statistics	T	2	2	1:30	25	25	50
	US03IDSTA02	Problem Solving in Index Numbers and Vital Statistics	P	2	4	2	25	25	50



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<b>Skill Enhancement Course (Any One Subject)</b>									
Chemistry	US03SECHE01	Water Analysis Practical	P	2	4	2	25	25	50
Physics	US03SEPHY01	Instrumentation and Transducers	T	2	2	1:30	25	25	50
	US03SEPHY02	Instrumentation skills in Physics	P	2	4	2	25	25	50
Biochemistry	US03SEBIC01	Tools and Techniques in Biochemistry-III	T	2	2	1:30	25	25	50
Botany	US03SEBOT01	Hydroponics-I	T	2	2	1:30	25	25	50
Statistics	US03SESTA01	Elements of Probability in Biostatistics	T	2	2	1:30	25	25	50
Computer Science	US03SECSC01	Information Technology Fundamentals – III (ITF-III)	T	2	2	1:30	25	25	50
Electronics	US03SEELE01	Fundamentals of Computer Hardware-3	T	2	2	1:30	25	25	50

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<b>IKS Course (Any One)</b>	US03IKBSC01	Dharmshashtra (Acharasamhita)	T	2	2	1:30	25	25	50
	US03IKBSC02	Mimansa (Purva and Uttara)	T	2	2	1:30	25	25	50
	US03IKBSC03	Nirukta	T	2	2	1:30	25	25	50
	US03IKBSC04	Nyaya Darshan	T	2	2	1:30	25	25	50
	US03IKBSC05	Puran	T	2	2	1:30	25	25	50
	US03IKBSC06	Shiksha	T	2	2	1:30	25	25	50
	US03IKBSC07	Vyakranam (व्याकरणम्)	T	2	2	1:30	25	25	50

