

SARDAR PATEL UNIVERSITY
B.Sc. Semester: IV
(Under Choice Based Credit Scheme)

Syllabus with Effect from: June, 2019-20 (Updated on 26-8-2019)

Course Type	Course Code	Name Of Course	T / P	Credit	Contact Hours Per Week	Exam Duration in hrs	Component of Marks		
							Internal	External	Total
Ability Enhancement compulsory Course	US04AENG21	Functional English	P	2	2	2	==	50	50
Core Course (Any Two Group)									
Chemistry	US04CCHE21	Organic Chemistry	T	4	4	3	30	70	100
	US04CCHE22	Analytical Chemistry	T	4	4	3	30	70	100
	US04CCHE23	Practicals (Prac. I & Prac. II)	P	4	8	6	==	100	100
Electronics	US04CELE21	Electronics Devices and Application	T	4	4	3	30	70	100
	US04CELE22	Instrumentation and Digital Electronics	T	4	4	3	30	70	100
	US04CELE23	Practicals	P	4	8	4	==	100	100
Physics	US04CPHY21	Electromagnetic Theory and Spectroscopy	T	4	4	3	30	70	100
	US04CPHY22	Classical, Quantum and Solid State Physics	T	4	4	3	30	70	100
	US04CPHY23	Practicals	P	4	8	4	==	100	100
Applied Physics	US04CAPH21	Spectroscopy	T	4	4	3	30	70	100
	US04CAPH22	Electricity, Magnetism and Solid State Electronics	T	4	4	3	30	70	100
	US04CAPH23	Practicals	P	4	8	4	==	100	100
Mathematics	US04CMTH21	Ordinary Differential Equations	T	4	4	3	30	70	100
	US04CMTH22	Partial Differential Equations	T	4	4	3	30	70	100
	US04CMTH23	Practicals	P	4	8	4	==	100	100
Instrumentation	US04CINS21	Signal Conditioning and Data Acquisition System	T	4	4	3	30	70	100
	US04CINS22	Electronic Instrumentation and Fibre Optics	T	4	4	3	30	70	100
	US04CINS23	Practicals	P	4	8	4	==	100	100
Statistics	US04CSTA21	Statistical Techniques	T	4	4	3	30	70	100
	US04CSTA22	Probability Distributions	T	4	4	3	30	70	100
	US04CSTA23	Practicals	P	4	8	4	==	100	100

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Biochemistry	US04CBCH21	Biochemistry of Bimolecular II	T	4	4	3	30	70	100
	US04CBCH22	Cell Biology	T	4	4	3	30	70	100
	US04CBCH23	Practicals	P	4	8	4	==	100	100
Bioinformatics	US04CBNF21	Computational Biology	T	4	4	3	30	70	100
	US04CBNF22	Animal Biology	T	4	4	3	30	70	100
	US04CBNF23	Practicals	P	4	8	4	==	100	100
Biology	US04CBIO21	Aquatic Biology	T	4	4	3	30	70	100
	US04CBIO22	Economic Botany	T	4	4	3	30	70	100
	US04CBIO23	Practicals	P	4	8	4	==	100	100
Biotechnology	US04CBIT21	Molecular Biology	T	4	4	3	30	70	100
	US04CBIT22	Plant and animal Biotechnology	T	4	4	3	30	70	100
	US04CBIT23	Practicals	P	4	8	4	==	100	100
Botany	US04CBOT21	Archegoniates, Economic And Nutraceutical Botany	T	4	4	3	30	70	100
	US04CBOT22	Plant Anatomy, Embryology, Tissue Culture And Basic Molecular Biology	T	4	4	3	30	70	100
	US04CBOT23	Practicals	P	4	8	4	==	100	100
Environmental Science	US04CENV21	Ecology and Soil Science	T	4	4	3	30	70	100
	US04CENV22	Ecosystem and Earth Science	T	4	4	3	30	70	100
	US04CENV23	Practicals	P	4	8	4	==	100	100
Genetics	US04CGEN21	Principles of Genetics –II	T	4	4	3	30	70	100
	US04CGEN22	Molecular Genetics	T	4	4	3	30	70	100
	US04CGEN23	Practicals	P	4	8	4	==	100	100
Microbiology	US04CMIC21	Environmental Microbiology	T	4	4	3	30	70	100
	US04CMIC22	Elements of Microbiology- II	T	4	4	3	30	70	100
	US04CMIC23	Practicals	P	4	8	4	==	100	100
Zoology	US04CZOO21	Vertebrata and Animal Behaviour	T	4	4	3	30	70	100
	US04CZOO22	Physiology and Wild Life	T	4	4	3	30	70	100
	US04CZOO23	Practicals	P	4	8	4	==	100	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
Industrial Chemistry (Voc.)	US04CICV21	Fluid Mechanical and Heat Transfer	T	4	4	3	30	70	100
	US04CICV22	Basic Analytical Chemistry	T	4	4	3	30	70	100
	US04CICV23	Practicals	P	4	8	4	==	100	100
Industrial Chemistry	US04CICH21	Chemical Plant Utilities	T	4	4	3	30	70	100
	US04CICH22	Analytical Chemistry	T	4	4	3	30	70	100
	US04CICH23	Practicals	P	4	8	4	==	100	100
Computer Science	US04CCSC21	Advanced 'C' and Introduction to Data Structures	T	4	4	3	30	70	100
	US04CCSC22	Web Application Development – II	T	4	4	3	30	70	100
	US04CCSC23	Practicals	P	4	8	4	==	100	100
Information Technology	US04CINT21	Operating Systems	T	4	4	3	30	70	100
	US04CINT22	Relational Database Management Systems-II	T	4	4	3	30	70	100
	US04CINT23	Practicals	P	4	8	4	==	100	100
Electronics & Communication	US04CELC21	Electromagnetic	T	4	4	3	30	70	100
	US04CELC22	Radio and Television System	T	4	4	3	30	70	100
	US04CELC23	Practicals	P	4	8	4	==	100	100
Instrumentation (Voc.)	US04CINV21	Electrical Instrument and Power Electronics- II	T	4	4	3	30	70	100
	US04CINV22	Oscillators and Optical Devices	T	4	4	3	30	70	100
	US04CINV23	Practicals	P	4	8	4	==	100	100

Skill -Enhancement Elective Course (Any One Subject)						
Course Code	Name Of Course	T /P	Credit	Contact Hours Per Week	Exam Duration in hrs	Total Marks
US04SSTA21	Foundation of Statistics - II	T	2	2	2	50
US04SSTA22	Operations Research - II	T	2	2	2	50
US04SSTA23	Biostatistics - II	T	2	2	2	50
US04SBIT21	Process Development in Industrial Microbiology	T	2	2	2	50
US04SBNF21	Fundamentals in Bioinformatics II	T	2	2	2	50
US04SENV21	Herbal Technology	T	2	2	2	50
US04SMTH21	Number Theory - 2	T	2	2	2	50
US04SICV21	Specific Industrial Chemicals	T	2	2	2	50
US04SICV22	Green Chemistry	T	2	2	2	50
US04SICV23	Instrumental Methods of Analysis	T	2	2	2	50
US04SICH21	Specialty Chemistry	T	2	2	2	50
US04SICH22	Introduction to Green Chemistry	T	2	2	2	50
US04SICT21	Information and Communication Technology - II	T	2	2	2	50
US04SINT21	R Programming	T	2	2	2	50
US04SNAD21	Nutrition and Dietetics	T	2	2	2	50
US04SSPN21	Soil & Plant Nutrition	T	2	2	2	50
US04SFND21	Food & Nutrition & Dietetics	T	2	2	2	50
US04SBCH21	Fundamentals of Biochemistry & Bioinstrumentation-II	T	2	2	2	50
US04SCHE21	Polymer Science-II	T	2	2	2	50
US04SCHE22	Medicinal Chemistry : Fundamentals	T	2	2	2	50
US04SCHE23	Green Chemistry : Fundamentals	T	2	2	2	50
US04SBMT21	Bio Mathematics-II	T	2	2	2	50