Rayat Shikshan Sanstha's									
Karmayeer Bhaurao Patil College Vashi									
(Autonomous)									
Facutly of Science									
As Per NEP-2020									
Proposed Structure and Credit Distribution for four year Multidisciplinary UG Program									

				. Toposcu Struc	and and Cream Distribution to	r tour year Muttidisciplinary UG Pro	g			
Level	Sem.	Faculty			Any Faculty	Vocational and Skill Enhancement Course (VSC)	Ability Enhancement Course (AEC)	Field Projects/Internship / Apprenticeship / Community Engagement and Services	Credits	Cumulative Credit
		Subject-1 Subject-2 Major			Subject-3 Generic Elective			Inter-intra faculty		
	1	DSC Mechanics and	DSE	Minor	1. Microprocessor - 8085			·		
	1	Thermodynamics (6 Credits)			(3Credits) Dairy Microbiology & Dairy					
		Microbiology (6 Credits)			Technology (3 Credits) OR Microbial World (3 Credits)					
Level 4.5		Fundamentals of Chemistry (6 Credits)	NA		Chemistry in Everyday Life (3 Credits)	NA	SDP-(2 Credits) E/M-(2 Credits)	NCC/NSS/DANCE/YOG A/MUSIC/CE (2 Credits)	6+6+3+4+2=21	
		Algebra & Calculus - I			Basics of Mathematics					
		Fundamentals of Biotechnol			Evolutuon and Ecology/		. (,	,		
		Introduction to			Biomolecules/ Food Adultration and Safety/ Plant and animal Physiology Python Programming (3					42 Credits
		programming in C			Credits)				 -	Certificates
		C++ with OOPS			Web Programming (3 Credits)					
		(6 Credits) Electricity, Magnetism and	NA		Microcontroller - 8051					
	2	Electronics (6 Credits) Basic Techniques in			The Human Microbiome -	NA	SDP-(2 Credits) E/M-(2 Credits)	NCC/NSS/DANCE/YOG A/MUSIC/CE (2 Credits)	6+6+3+4+2=21	
		Microbiology(6 credits) BASIC CONCEPTS IN			(3Credits) / Environmental Microbiology - (3Credits) ENVIRONMENTAL					
		CHEMISTRY (6 Credits)			CHEMISTRY(3 Credits)					
Level 5.0		Algebra & Calculus - II (6 Credits)			Fundamentals of Mathematics (3 Credits)					
		Basics of Genetics (6 Credits)			Biochemistry/ Biosafety and Bioethics/ Entrepreneurship Development / Basics of Pharmacology(3 Credits each)					
		Fundamentals of Data Structure (6 Credits)		Discrete Mathematics	Digital Marketing Fundamentals(3 Credits)					
		Operating System (6		Numerical and statistical	Web Technology(3 Credits)					
		Credits)		methods (6 Credits)	web reciniology(5 creates)					
Level 5.5	3	Optics and Acoustics(6 Credits)	NA	Chemical Physics (4)	Fundamentals of materials Science / Computational Physics-I (3Credits)	Laborotary equippments and measuring techniques (4)	EVS-(2 credits)	NCC/NSS/DANCE/YOG A/MUSIC/CE (2 Credits)	6+4+3+4+2+2=21	
		Introduction to Medical Microbiology & Immunology (6 Credits)		Epidemiology & public Health awareness (4 Credits)	(Practicum) 2. Agricultural Microbiology(3Credits)	Food Adulteration & Safety - 4				
		Physical & Inorganic Chemistry (6 Credits)		INSTRUMENTAL METHODS IN CHEMICAL ANALYSIS (4 Credits)	INSTRUMENTAL METHODS IN CHEMICAL ANALYSIS	PREPARATION OF HOUSEHOLD CHEMICALS (3Credits)				
		Real Analysis-I (6 Credits)			Plane and Solid Geometry/ Business Mathematics (3Credits)	Advance Excel+ Practical				
		Cell Biology (6 Credits)			Evolutuon and Ecology/ Biomolecules/ Food Adultration and Safety/ Plant	Hydroponics and Aquaponics (4 credits)				
		Object Oriented Programming using Java		Operating System Foundations &Linux	and animal Physiology (3 Physical Computing and IoT Programming	Introduction to Web Development				
		DBMS,Applied Mathematics			Linux System Administration	Core Java				84 Credits
	4	Modern Physics, Laser &		Environmental Physics	1. Energy Science /	Mobile Repairing (4)				Diploma
Level 6.0		Fibre Optics (6 Credits) Clinical Microbiology -(6		(4)	Computational Physics- II (3 Credits) 1. Waste Water Management	Basics techniques in Hematology - 4				
		Credits)		- 4	-3, 2.Biomedical Waste					
		ORGANIC AND ANALYTICAL CHEMISTRY	NA NA		DAIRY CHEMISTRY	CHEMISTRY OF COSMATICS	Indian Constitution it Human Rights (2 Credits)	NCC /NSS/DANCE/ YOGA/ MUSIC/CE (2 Credits)	6+4+3+4+2+2=21	
		Integral and Vector Calculus, Integral and Vector Calculus			Discrete Mathematics					
		Immunology			Biochemistry/ Biosafety and Bioethics/ Entrepreneurship Development / Basics of	Mushroom Cultivation (4 Credits)				
		Advanced Java Programming		Computer Networking Fundametals	rmindaconovi v Credits each)	Web Application Development				
		Data Structures		Application based Python Programming	Computer Oriented Statistical Techniques	Enterprise Java				
	5	Class. & Quan. Mechanics (4) Research Methodology Solid State Devices		9		Repairing of household appliances (4)				
		Microbial Genetics I 2. Medical Microbiology and Immunology I 3. Microbial Biochemsitry I		NA NA	NIA	Bioprocess Technology I - 4	NIA	Internelsin (A.C. 200	9±4±4±4 =20	
Level 6.5		1. ADVANCED PHYSICAL CHEMISTRY INORGANIC CHEMISTRY 3. ADVANCHEMISTRY 4. SEPERAT ANALYTICAL CHEMISTRY	Y 2. CONCISE CED ORGANIC	. NA	NA	PHARMACEUTICAL CHEMISTRY	NA Inter	Internship (4 Credits)	8+4+4+4=20	
		Linear Algebra-I 2. Topology Fourier Series 3. Basic Complex	of metric spaces and Analysis / Basic			Advanced Python-I				
		Statistics and Probability 1. Molecular Biology 2. Industrial Biotechnology				Biosensors				
		3. (Plant / Animal Biotech)								

		Software Engineering 2. Dot Net Technology with C# 3. Artificial Intelligence (4) OR Cyber Forensics				Advanced Python Programming(4)				124 Credits
		Advanced Web Programm Networks 3.Software Project Data Warehouse				Software Testing				Three Years Bachelor Degree
		At., Mol, & Nuclear Physics (a Analog and Digital Circuits EMT and Electronics	4)	NA .	NA	Energy storage and conversion devices (4	process Technology II - 4 NA Research Project Credits) anced Python-II			
		Microbial Genetics II 2. Medi Immunology II 3. Microbial Bion	chemsitry II			Bioprocess Technology II - 4		Research Project (4 Credits)	8+4+4+4=20	
Level 7.0		1. SYNTHETIC CHEMISTRY AND SPEC ADVANCED INSTRUMENTAL TECHNI SPECTROSCOPY 4. SOLID STATE CHI CATALYSIS	CTROSCOPY 2. IQUES 3. MOLECULAR EMISTRY AND			CHEMISTRY OF DYES				
		Abstract Algebra-II 2. Topolog Numerical Analysis / Operation	Research			Advanced Python-II				
		Genetic Engineering 2. Marine Environmental Biotech / Agricult	Biotechnology 3. tural Biotech			Embryology				
		Machine Learning with Python (4) 2. Software Testing (4) 3. Business Intelligence and Big Data Analytics-I				R Programming(4)				
		Security in computing 2. Linu: Administration 3. Business Intelli				Software Quality Assurance				
	7	Mathematical Methods in Physic Electrodynamics (5) Materials Science - I / Comm. S	cs (5). iystem - I (5)							
Level 7.5		Research Methodology 2. Cell Genetics 3.Fermentation Technolo Microbiology	ogy & Food & Dairy	NA	NA	NA	NA	Internship(5 Credits)	5+5+5+5=20	
Level 7.5		1. QUANTUM CHEMISTRY 2. OR AND COORDINATION CHEMISTR' STEREOCHEMISTRY 4. QUALIT CHEMISTRY	GANOMETALLICS Y 3. Y IN ANALYTICAL							
		Analysis - I 2. Advance Algeb Complex Analysis / Data structure	and algorithm							
		Bioinstrumentation 2. Molecular Diagnostic Techniques 3. Food Biotech / Medical Biotech)								
		Research in Computing 2. Advanced Database Technologies 3. Business Intelligence and Big Data Analytics-II								
		Cloud Computing 2. Ethical Hacking Image Processing / Devops								164 Credits Four Year
		Statistical Inference(5) 2. Advanced Database Technologies (5) 3. Computer Vision Or Data Visualization using Tableau (5)								Bachelor Degree in Main Faculty
	8	Materials Science - II / Comm. System - II (5) Experimental Physics (5)								-
		Microbial Biochemistry 2. Pharmaceutical Microbiology ORGANIC NAME REACTIONS AND REAGENTS 2. WASTE MANAGEMENT AND MATERIAL ANALYSIS								
				NA	NA	NA	NA	Research Project(10 Credits)	5+5+10=20	
Level 8.0		Topology 2. Field Theory 3. Machine Learning Enzyme Technology 2. Omics								
		Natural Language Processing Deep Learning 2.								
		Data Science 2. Applied Artificial Intelligence								
		Natural Language Processing (5) 2. Deep Learning								
	Sr.No.	Department Subject Sequence	Colour Scheme							
		Physics								
	3	Microbiology Chemistry								
	4	Mathematics								
	6	Biotechnology Comp Sci								
	7	IT								
	8	D S								