



**Shiv Chhatrapati Shikshan Sanstha's
Rajarshi Shahu Mahavidyalaya, Latur
(Autonomous)**

**Department of Biotechnology
Structured Work Plan for Teaching
Academic Year 2018-19 (Term-I)**

1. Details of Classes to be taught

Sr. No.	Class	Name of Asst. Prof.	Subject	Paper
1	B.Sc.BT SY III Sem	Shilpa R.Surwase	Biotechnology	Course Title: Immunology and Virology Course Code : U-IMV-399 Course Title: Lab Course X Course Code:U-LAC-403

2. Summary of Lesson Plan

Name of Teacher: Shilpa R.Surwase

Class: B.Sc. BT. II (Third Semester)

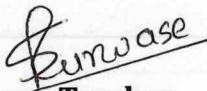
Sr. No.	Subject	Unit and Chapter to be covered	Date	No. of Lect ures	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Immunology and Virology	UNIT I Overview of Immunology 1.Historical perspective 2.Innate and Adaptive Immune response. 3.Hematopoiesis, 4.Cells of Immune system and their biological role. 5.Humoral and cell mediated Immunity. 6.The Primary and secondary lymphoid organs.	01-08-18 To 14-08-18	01 05 02 02 02 03	Classroom Group Discussion	Unit - I 20/08/18

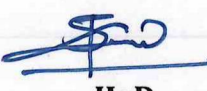
	UNIT II Basics of Immunology 1. Antigen: Antigens- General properties, types, 2. Factors that influence antigenicity, 3. Epitopes, Paratopes, Haptens, adjuvant and its types. 4. Antibody: General Structure of antibody molecule, 5. Antibodies- variation in structure of antibody and their biological significance. 6. Antibody Antigen interactions: Strength of Antigen-Antibody Interactions, K_a and K_d with its importance, Affinity and avidity 7. Immunological reactions: Precipitation and Agglutination reactions, ELISA.	15-08-18 To 30-08-18	01 02 02 02 02 03 04		Unit – II 29/08/18
	UNIT III Introduction to viruses 1. Viruses and their importance. 2. Discovery of viruses. 3. Structure of virus: viral nucleic acid, nucleocapsid, envelope. 4. Variation in structure of viruses. 5. Viroids and Prions. 6. Nomenclature and Classification of viruses	31-08-18 To 15-09-18	01 01 03 01 01 04		Unit – III 10/09/18
	UNIT IV 1. Structure of animal virus(HIV) 2. Structure of plant virus (TMV). 3. Life cycle and replication of DNA virus, 4. RNA virus-Retrovirus,	17-09-18 To 03-10-18	03 02 02 02		Unit IV 20/09/18

	5.Bacteriophages (lytic and lysogenic)		02		
	5.Vaccines		02		
	6.Antiviral drugs.		02		

Sr. No.	Subject	Practicals	Date	No. of Practicals
1	Immunology and Virology	Agglutination reaction.	1/08/18 To 3/10/18 Batch A, B,C,D	04
2		Immunoprecipitation.		04
3		Immunodiffusion.		04
4		Blood film preparation and identification of cells.		04
5		Differential leucocyte count		04
6		Microscopic observation of lymphoid organs.		04
7		Widal, VDRL		04
8		Demonstration of ELISA.		04
9		Isolation of Bacteriophages from sewage.		04
10		Titration of phage, Isolation of plant virus.		04
11		Demonstration of one step growth curve of Bacteriophages.		04
12		Cultivation of virus in embryonated eggs.		04

Date: 01/08/2018


Course Teacher


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Academic Year 2018-19 (Term-I)

1. Details of Classes to be taught

Sr. No.	Class	Name of Asst. Prof.	Subject	Paper
1	B.Sc BT FY I Sem	Ms.Shilpa R.Surwase	Biotechnology	Course Title: Introduction To Microbiology Course Code : U-INM-189 Course Title: Lab Course III Course Code: U-LAC-193

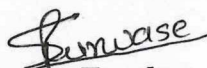
2. Summary of Lesson Plan


Name of Teacher: Shilpa R.Surwase


Class: B.Sc. BT. I (First Semester)

Sr. No.	Subject	Practicals	Date	No. of Practicals
1	Introduction to Microbiology	1. General Rules and Safety in Microbiology Laboratory.	1/08/18 To 3/10/18 Batch C And D	02
2		2. Study of basic requirements in Microbiology Laboratory- Autoclave, Hot air oven & Incubator		02
3		Staining techniques (Monochrome staining, Grams staining ,Negative staining)		02
4		Preparation of solid and liquid media'		02
5		Isolation of bacteria by spread plate, streak plate and pours plate method		02
6		Isolation of microorganisms from soil, water and air		02
7		Isolation of microorganisms by using selective media.		02
8		Study of motility of Microorganisms by hanging drop method.		02
9		Study of bacterial growth curve.		02
10		Effect of environment on growth of microorganisms.		02

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Year 2018-19 (Term-II)

1. Details of Classes to be taught

Sr. No.	Class	Name of Asst. Prof.	Subject	Paper
1	B. Sc. BT FY Div A & B	Ms. S R Surwase	Biotechnology	Fundamentals of Biological Chemistry

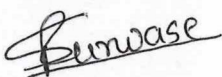
2. Summary of Lesson Plan


Name of Teacher: Ms. S R Surwase


Class: B. Sc. BT FY Div A & B (Second Semester)

Subject	Practical to be covered	Date	No. of Practicals
Fundamentals of Biological Chemistry	1. Preparation of solutions, buffer sensitivity, specificity accuracy, Molarities, molality, Normality.	03, 04 & 05.12.18	03
	2. Qualitative test for carbohydrates	10, 11 & 12.12.18	03
	3. Estimation of reducing sugars by Benedict's Method	17, 18 & 19.12.18	03
	4. Spot tests for Amino Acids	24, 25 & 26.12.18	03
	5. Estimation of Amino acids	01, 02 & 03.12.18	03
	6. Protein estimation	07, 08 & 09.01.19	03
	07. Saponification of Fats	14, 15 & 16.01.19	03
	08. Estimation of Cholesterol	28, 29 & 30.01.19	03
	09. Sugar estimation by DNSA	04,05 & 06.02.19	03
	10. Sugar estimation by Anthrone Method	18,19 & 20.02.19	03
	11. DNA estimation by DPA Method.	05, 06 & 07.03.19	03

Date: 01/12/2018


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