Rajarshi Shahu Mahavidyalaya, Latur

(Autonomous)

Structured Work Plan for Teaching

(Winter-2020-2021)

1. **Details of Classes to be taught**

Sr. No.	Class	Name of Asist. Prof.	Subject	Paper
1	B. Sc BT I	Miss. Shubhangi G. Bansude	Biotechnology	**Course Title:** Introduction to Microbiology **Course Code:** U-INM-189 **Course Title:** Lab Course III **Course Code:** U-LAC-193

Name of Teacher: Miss. Shubhangi G. Bansude Class: B. Sc BT (First Semester)

Sr. No.	Subject	Unit and Chapter to be covered	No. of Lectures	Date	Academic activities to be organizer	No. of Test / Assignment
1	Introduction to Microbiology	**Unit III** • Concept of systematic and classical taxonomy including Bergeys Manual of Bacteriology. • Nutritional Requirements; Major and Minor elements and growth Factors. • Nutritional types of Microoganisms. • Types of culture media; Defined, selective, natural,	01 01 01 01	01/ 01/2022 To 07/01/2022		

		differential, enrichment, synthetic media. • Pure culture techniques; Streak, Pour plate, spread plate, and roll tube method.	01			
		Unit IV • Bacterial Growth; Growth curve, Generation time, Growth rate, Specific Growth rate. • Methods Of enumeration; Microscopic methods, plate counts, Biomass, Chemical Methods, Optical Density. • Continous Culture; Chemostat and Turbidostat Models. • Diauxic Growth and Synchronous Culture.	02 02 01 01	08/01/2022 To 15/01/2022		

Sr. No.	Subject	Practical's	Date	No. of Practical's
1	Introduction to Microbiology.	General Rules and safety in microbiology Laboratory	01/01/2022 To 15/01/2022	01
2		Study of basic requirements in Microbiology Laboratory		01
3		Preparation of Solid and liquid media		01
4		Isolation of Bacteria by spread plate Method		01
5		Isolation of Bacteria by streak plate method		01

6		Isolation of bacteria by pour plate method		01
7		Isolation of Microorganisms from soil		01
8		Isolation of microorganisms from water.		01
9		Isolation of microorganisms from Air.		01

Name of Teacher: Miss. Shubhangi G. Bansude

Signature:

Rajarshi Shahu Mahavidyalaya, Latur

(Autonomous)

Structured Work Plan for Teaching

(Summer 2021-2022)

1. **Details of Classes to be taught**

Sr. No.	Class	Name of Asist. Prof.	Subject	Paper
1	B. Sc BT III	Miss. Shubhangi G. Bansude.	Biotechnology	**Course Title:** Biofertilizer II **Course Code:** U-ADC-640(B)
2.	B.Voc. II		Food Processing Technology	**Course Title:** Food Spoilage and Control **Course Code:** U-FSC-518 **Course Title:** Lab Course **Course Code:** P-LAC-519

1) Summary of Lesson Plan

Name of Teacher: Miss. Shubhangi G. Bansude **Class: B. Sc BT (Sixth Semester)**

Sr. No.	Subject	Unit and Chapter to be covered	No. of Lectures	Date	Academic activities to be organizer	No. of Test / Assignment

1		**Unit 1** • Biofertilizer; Current and future needs. • Use of Genetically Engineered Microorganisms for improvement of Biofertilizer. • Indigenous Technology Based Biofertilizer. • Advantages of IMO Based Biofertilizer over Standard Biofertilizer.	02 02 02 02	01/ 01/2022 To 26/01/2022	Group Discussion	
		Unit II • Component of organic farming system Manures, • Farm Yard Manure, Green Manures. • Biogas slurry, sewage and sludge. • Roles of Manures • Socio- economic constraints in organic farming • Integrated Nutrient Management.	01 02 02 01 01 01	27/01/2022 To 22/02/2022		
		Unit III: • Standards for commercial production of Biofertilizer • Quality Control of Biofertilizer • Labeling And Storage of Biofertilizer • Certifications for commercial Biofertilizer units, • Effect of storage on Efficacy of Biofertilizer.	01 02 01 01 02	27/02/2022 To 16/03/2022		

		Unit IV: • Lab to Land Applications of Biofertilizer • Designing and implementation of pot experiments. • Field application to check efficacy of Biofertilizer • Nodulation Experiment • Application of Randomized block design for field experiments.	02 01 01 01 01	17/03/2022 To 16/04/2022		

Sr. No.	Subject	Practical's	Date	No. of Practical's
1	Process Biotechnology	Survey of Biofertilizer products in market	01/01/2022 To 16/04/2022	01
2		Introduction to GMO and Indigenous Technology		01
3		Production of compost from various resources		02
4		C, N, P, and K analysis of organic manure		04
5		Effect of storage on efficacy of Biofertilizer.		02
6		QC Tests of Biofertilizer		01
7		Designing of Pot experiment for efficacy study of Biofertilizer		02
8		Designing of field experiment for efficacy study of Biofertilizer.		02

Name of Teacher: Miss. Shubhangi G. Bansude

Signature:

Name of Teacher: Miss. Shubhangi G Bansude Class: B.Voc FPT (Second Semester)

Sr. No.	Subject	Unit and Chapter to be covered	No. of Lectu	Date	Academic activi	No. of Test / Assignm

			res		**ties to be organizer**	**ent**
1	Food Spoilage And Control	**Unit 1** • History and development of Food microbiology. • Common Food Born Microorganisms • Role And significance of Microorganisms in food • Methods for detection of Microbes in fresh meat and processed meat.	02 02 02 02	01/ 01/2022 To 27/01/2022	Group Discussion Surprise test Quiz comp-etition	1)Class test on unit I: 2)Class test on Unit II: 3)Quiz competition.

		Unit II • Food Preservation and principles of quality control • Chemicals and Radiations • Low and High tempreture • Aseptic Packaging • Microbiological Quality Standards of Food • FDA • HACCP • ISI	03 02 02 04 04 02 02 02	28/01/2022 To 20/02/2022		
		Unit III: • Microbial Food Spoilage and Food Borne Diseases • Staphylococcal, Rcoli, Salmonellosis, Shigellosis, Listerial Infections • Mycotoxins, Aflatoxins	02 03 02 02	21/02/2022 To 16/03/2022		

		• Alternaria Toxins • Toxicogenic Phytoplanktons • Toxicogenic Viruses	02 02			
		Unit IV: • Applications of Food Microbiology • Beneficial Uses of Microorganisms in Food • Intestinal Beneficial Bacteria • Concept of Prebiotics and Probiotics • Genetically Modified foods • Biosensors in Food	02 02 01 01 03 03	17/03/2022 To 16/04/2022		

Sr. No.	Subject	Practical's	Date	No. of Practical's
1	Food Spoilage And Control	Introduction to Basic Microbiology Laboratory Practices and Equipments	17/01/2022 To 16/04/2022	02
2		Preparation and sterilization of nutrient broth and media		01
3		Morphological Study of Bacteria and fungi using permanent slides		01
4		Simple staining and gram staining		02
5		Standard Plate Count		01
6		Bacteriological ananlysis of water.		01
7		Assesment of surface sanitation by swab/ Rinse method		01
8		Assesment of personal hygine		01
9		Scheme for detection of Food Borne Pathogens		01

Name of Teacher: Miss. Shubhangi G. Bansude

Signature: