

# Rajarshi Shahu Mahavidyalaya, Latur

## (Autonomous) Structured Work Plan for Teaching (Dec- 2021 to Apr 2022)

Details of Classes to be taught

Sr. No.	Class	Name of Assit. Prof.	Subject	Paper
1	B.Sc.II	R.L.Shaikh	Botany	Paper-VIII Plant Breeding and Biotechnology

Summary of Lesson Plan

Name of Teacher: R.L.Shaikh

Class: B.Sc.II (IV Semester)

Sr. No.	Subject	Unit and Chapter to be covered	Date	No. of Lectures	Academic activities to be organized	No. of Test / Assignment with topic and date
2	Unit-I: PLANT BREEDING-I (10L)	1. Definition, Aims and Objectives 2. Centres of origin. 3. Methods of Plant Breeding: i. Plant introduction and acclimatization ii. Mass Selection. iii. Pure line selection. iv. Clonal selection. v. Pedigree selection.	17-12-21 To 12-01-22	01 01 01 02 02 01 02		
	Unit-II: PLANT BREEDING-II. (10L L)	1. Hybridization. 2. Heterosis and hybrid vigour. 3. Mutation breeding. 4. Polyploidy. 5. Breeding in cotton	13-01-22 To 04-02-22	02 02 02 02 02		

UNIT-III: BIOTECHNOLOGY - I (13)		<b>1. Genetic Engineering:</b> i. Definition, scope and importance ii. Tools: a) Restriction Endonuclease b) Vectors: plasmids, cosmids. iii. Technique of r-DNA iv. Genomic and c-DNA libraries <b>2. Agrobacterium mediated gene transfer:</b> (Biology of <i>Agrobacterium</i> , Ti-plasmid, and <i>Agrobacterium</i> mediated transfer technique), <b>3 .Transgenic plants.</b>	07-02-22 To 09-03-22	02 02 02 02 02 01		
UNIT-IV: BIOTECHNOLOGY - II (12)		<b>1.Tissue culture:</b> i. Introduction, ii. Concept of Totipotency of cell, iii. Basic aspects of tissue culture laboratory, iv. Technique of tissue culture v. Callus culture, differentiation and morphogenesis. <b>2. Applications of Tissue culture:</b> i. Micropropagation, ii. Production of secondary metabolites, iii. Somatic hybridization, iv. Anther culture and production of haploids.	10-03-22 To 15-04-22	02 02 02 02 02 02		

Teacher

Head  
Department of Botany  
UG, PG and Research Centre  
Rajarshi Shahu Mahavidyalaya (Autonomous),  
LATUR-413 512

Principal  
Rajarshi Shahu Mahavidyalaya  
(Autonomous), Latur