

MAHARANA PRATAP MAHAVIDYALAYA, JUNGLE DHUSAR, GORAKHPUR**LESSON PLAN 2025-26 Course Code: BOT 202F****Course Title: Practical Sem III****Credits: 0+2**

DATE	LECTUR E NO	TEACHE R	UNIT	TOPIC
06.08.2025	1	Dr. AKS/ Dr. AKG	Microbiology	Isolation of bacteria. Identification of bacteria.
07.08.2025	2	Dr. AKS/ Dr. AKG	Microbiology	Staining techniques: Gram's, Negative, Endospore, Capsule and Cell Wall.
13.08.2025	3	Dr. AKS/ Dr. AKG	Microbiology	Cultural characteristics of bacteria on NA.
14.08.2025	4	Dr. AKS/ Dr. AKG	Microbiology	Pure culture techniques (Types of streaking).
20.08.2025	5	Dr. AKS/ Dr. AKG	Microbiology	• Biochemical characterization:IMViC, Carbohydrate fermentation test, Mannitol motility test, Gelatin liquefaction test, Urease test, Nitrate reduction test, Catalase test, Oxidase test.
21.08.2025	6	Dr. AKS/ Dr. AKG	Microbiology	• Isolation of nitrogen fixing bacteria from root nodules of
27.08.2025	7	Dr. AKS/ Dr. AKG	legumes.	Enumeration of rhizosphere to non rhizosphere population of bacteria. Isolation of antagonistic Pseudomonas from soil.
28.09.2025	8	Dr. AKS/ Dr. AKG	legumes.	Microscopic observations of root colonization by VAM fungi. Isolation of Azospirillum sp. from the roots of grasses.
03.09.2025	9	Dr. AKS/ Dr. AKG	legumes.	Isolation of phyllosphere microflora. Isolation of P solubilizing microorganisms. Wine production.
04.09.2025	10	Dr. AKS/ Dr. AKG	legumes.	• Isolation of lactic acid bacteria from curd. Isolation of lipolytic organisms from butter or cheese.
10.09.2025	11	Dr. AKS/ Dr. AKG	legumes.	Immobilized bacterial cells for production of hydrolytic enzymes.

11.09.2025	12	Dr. AKS/ Dr. AKG	legumes.	Enzyme production and assay – cellulase, protease and amylase.
17.09.2025	13	Dr. AKS/ Dr. AKG	legumes.	Immobilization of yeast. Isolation of cellulolytic and anaerobic sulphate reducing bacteria.
18.09.2025	14	Dr. AKS/ Dr. AKG	legumes.	Isolation and characterization of acidophilic, alkalophilic and halophilic bacteria.
24.09.2025	15	Dr. AKS/ Dr. AKG	legumes.	Cultivation of Spirulina, & Chlorella in lab for biofuel.
25.09.2025	16	Dr. AKS/ Dr. AKG	legumes.	Visit to NBAIM, Mau, Varanasi(Kashi)/ IMTECH (Institute of Microbial Technology), Chandigarh for viewing Culture Repository.
08.10.2025	17	Dr. AKS/ Dr. AKG	legumes.	Visit to biofertilizers and biopesticides unit to understand about the Unit operation procedures. Alcohol production. from Sugarcane Juice.
09.10.2025	18	Dr. AKS/ Dr. AKG	Plant Pathology	Preparation of fungal media (PDA) & Sterilization process. Isolation of pathogen from diseased leaf.
29.10.2025	19	Dr. AKS/ Dr. AKG	Plant Pathology	Identification: Pathological specimens of Brown spot of rice, Bacterial blight of rice,
30.10.2025	20	Dr. AKS/ Dr. AKG	Plant Pathology	Loose smut of wheat, Stem rot of mustard,
06.11.2025	21	Dr. AKS/ Dr. AKG	Plant Pathology	Late blight of potato;
12.11.2025	22	Dr. AKS/ Dr. AKG	Plant Pathology	Slides of uredial, telial, pycnial & aecial stages of Puccinia,
13.11.2025	23	Dr. AKS/ Dr. AKG	Plant Pathology	Few viral and bacterial plant diseases.