

WORK PLAN FOR TEACHING

| Course: M. Sc. WBAT Subject: WT 511 MJ Microbiology of Alcohol, Beer & Wine Semester: I Period: August to December 2024 | | | | |
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| Unit | Topic | Hours allocated | Allocated to faculty | Remark (If any) |
| I | <p>Introduction to Micro-organisms, classification and staining techniques:</p> <p>Occurrence, types and importance of microbes, Difference between prokaryotic cell and eukaryotic cells, Types of microbes (bacteria, fungi, viruses, protozoa & algae) Industrial application of bacteria & fungi</p> <p>Cell biology—Ultra structure of bacteria and detailed study of cell organelles; cell-wall, cell-membrane, capsule, endospore, flagella and their types and mechanism of flagella movement.</p> <p>Stains and staining techniques - Definition of stain and dyes, types of stain, procedure and mechanism of monochrome staining, Gram staining and negative staining.</p> <p>Yeast Microbiology Yeast morphology and taxonomy, Ultra structure of yeast and detailed study of cell organelles in Comparison with other microorganism, Glucophilic and fructophilic yeast. Nutritional requirements of yeast. Aerobic and anaerobic metabolic pathways in yeast for sugar dissimilation, Isolation of yeast.</p> | 15 | SnehalPatil | |
| II | <p>Sterilisation and Disinfection :-</p> <p>Sterilization, disinfection, antiseptic and antimicrobial agents, characteristic of ideal disinfectant.</p> <p>Physical Agents - High temp - moist heat & dry heat Low temp. Refrigeration Desiccation, Radiation, Ionizing -(x-rays, gamma rays & cathode). Non-ionizing -(UV rays.) Filtration (Bacteriological filters and HEPA filters), Osmotic Pressure</p> <p>Chemical agents -phenol & phenolic compounds, detergents, aldehydes, gaseous agents, alcohol, heavy metals, halogens.</p> | 15 | Dr. R. V. Burase | |

