

M.Sc. (Ag.) PLANT PATHOLOGY

GPAT 611 MYCOLOGY (2+1)

Course Outcome

- CO 1. Knowing the current taxonomic classification of plant pathogenic fungi and their updated new scientific genera.
- CO 2. Being updated with the life cycle of *Protozoa*, *Chromista* and *Fungi*, their sporulation characters, morphology and phylogenetic analysis.
- CO 3. Knowing the life cycle of club root, Oomycota and Zygomycota fungi.
- CO.4 Knowing the life cycle of Ascomycota fungi
- CO 5. Knowing the life cycle of Basidiomycota fungi

GPAT 612 PLANT BACTERIOLOGY (2+1)

Course Outcome

- CO 1. Having knowledge about different types of classification and new Nomenclature of phyto- pathogenic bacteria.
- CO 2. Plant pathogenic bacteria and bacterial secretion systems Having knowledge about plant pathogenic bacterial pathogenesis and physiology
- CO 3. Knowing bacterial Hrp genes and new innovative techniques of plant pathogenic bacteria detection
- CO 4. Updated knowledge about pathogenesis of bacterial diseases
- CO 5. Being aware of the emerging plant bacterial diseases and Integrated disease management

GPAT 613 PRINCIPLES AND APPLIED PLANT PATHOLOGY (2+1)

Course Outcome

- CO 1. Being aware of Physiological specialization of plant pathogens
- CO 2. Knowing the Principles of plant disease management
- CO 3. Expertise in isolation, purification, mass multiplication of fungal and bacterial biocontrol agents.
- CO 4. Trained in physical and special methods of plant disease management
- CO 5. Being aware of the role of nutrients for plant disease management

GPAT 621 PLANT VIROLOGY (2+1)

Course Outcome

- CO 1. Having knowledge about the importance of plant viruses and Virus replication
- CO 2. Having an idea about Virus and vector relationship and viral pathogenesis
- CO 3. Being aware of the Monoclonal antibodies and polyclonal antibodies production
- CO 4. Having knowledge of the plant virus evolution, movement and physiology of virus infected plants
- CO 5. Expertise in Integrated Plant Viral disease management

GPAT622 DISEASE RESISTANCE, EPIDEMIOLOGY AND FORECASTING OF PLANT DISEASES (2+1)

Course Outcome

- CO 1. Having knowledge about the plant disease dynamics
- CO 2. Being aware of Pathogenesis related proteins

CO 3. Knowing about the Elicitor development and signal transduction pathway

CO 4. Being aware of the Pathogen Biology, AUDPC curve

CO 5. Trained in Yield loss models and computerized disease forecasting

GPAT 623 DISEASES OF CROP PLANTS (2+1)

Course Outcome

CO 1. Having knowledge of pathogenesis, symptoms and management of cereals and pulse crops

CO 2. Having knowledge of pathogenesis, disease symptoms and managing diseases of Oilseed and Cash crops

CO 3. Having knowledge of pathogenesis, disease symptoms and managing diseases of fruit and vegetables

CO 4. Having knowledge of pathogenesis, disease symptoms and managing diseases of Tuber, Spices and Condiments

CO 5. Expertise in innovative and indigenous disease management practices of Plantation and Ornamental crops

GPAT 624 POST HARVEST PATHOLOGY AND MUSHROOM PRODUCTION (1+1)

Course Outcome

CO 1. Being aware of the significance of seed transmission and longevity of seed borne diseases

CO 2. Having knowledge of Phytosanitary certificates, Seed certification standard, storage and field fungi

CO 3. Being aware of mycotoxins and post-harvest pathology

CO 4. Expertise in indigenous practices for Post-harvest and seed borne diseases management

CO 5. Trained in edible mushroom production

OPC GPAT 711 BIOLOGICAL CONTROL OF CROP DISEASES (2+1)

Course Outcome

CO 1. Having updated knowledge of new bio regulators.

CO 2. Having knowledge about the mechanism of Bio control agents.

CO 3. Having knowledge, the Hypovirulence, suppressive soil and compatibility of Bio control agents.

CO 4. Trained in mass production and quality control methods of Bio control agents.

CO 5. Expertise in cross protection techniques and botanical approaches for plant disease management.

OPC GPAT 712 MUSHROOM TECHNOLOGY (2+1)

Course Outcome

CO 1. Updated knowledge about new edible and medicinal mushrooms

CO 2. Trained in isolation and identification of mushroom

CO 3. Awareness about the mushroom production constraints

CO 4. Having knowledge about the uses of Mushroom

CO 5. Expertise in cost analysis in mushroom production and project preparation

