

Devi Ahilya Vishwavidyalaya Indore (M.P.)

Department of Higher Education, Govt. of M.P.

Post Graduate Semester wise Syllabus

As recommended and Approved by Board of Studies D.A.V.V.

उच्च शिक्षा विभाग, म.प्र. शासन

स्नातकोत्तर कक्षाओं के लिये सेमेस्टर अनुसार पाठ्यक्रम
अध्ययन मण्डल देवी अहिल्या विश्वविद्यालय द्वारा अनुशंसित तथा अनुमोदित

Session (सत्र) 2019-20

M. Sc. Botany (Semester System)

First Semester

Course PG 101: Biology and Diversity of Viruses, Bacteria and Fungi 85+ 15

- UNIT I **Viruses:** Characteristics and ultra-structure of virions, isolation and purification of viruses; chemical nature of viruses; replication, transmission and economic importance of viruses. Viral diseases of plants.
- UNIT II **Prokaryotes:** Archaeobacteria, Eubacteria, Actinomycetes and Mycoplasma: General characters, ultra-structure, nutrition, classification, reproduction, transmission, plant diseases and their control measures. Cyanobacteria: salient features, ultra-structure and biological importance.
- UNIT III **Mycology:** General characters, substrate relationship of fungi, cell ultra-structure, thallus organization, mode of nutrition (saprophytic, parasitic, symbiotic) and reproduction. Heterothallism and parasexuality. Economic importance of fungi.
- UNIT IV **Mycology:** Classification (Ainswarth, 1973; Alexopoulos *et.al.* 1996), General account of Mastigomycotina and Zygomycotina. Fungi as biocontrol agent.
- UNIT V **Mycology:** Diagnostic features and general account of Ascomycotina, Basidiomycotina and Deuteromycotina. General account of Heterokariosis, Mycorrhiza, Symbiosis and some important fungal diseases of plants.

Suggested Readings

1. Alexopoulos, C.J. Mims, C. W. and Blackwel, M; 1996: Introductory Mycology, Ibon Wiley and Sons Inc.
2. Clifton, A; 1958: Introduction to Bacteria, McGraw- Hills Book Co. New Delhi.
3. Madigan, M T. Martinko, J. M and Parker Jack; I 997: Brock Biology of Microorganisms, (8th edition) Prentice Hall, N,J. U.S.A
4. Mandahar, C. L.; 1978: Introduction to Plant Viruses. Chand and Co.Ltd. Delhi.
5. Mehrotra, RS. and Aneja, RS.; 1998: An Introduction to Mycology. New Age Intermediate Press.
6. Rangaswamy, G. and Mahadevan, A; 1999: Diseases of Crop Plants in India (4th edition).Prentice Hall of India Ltd. New Delhi.
7. Webster, J.; 1985: Introduction to Fungi Cambridge University Press.
8. Dubey, R C. and Maheshwari, D. K.; 2005: A Text Book of Microbiology, S. Chand Publisher, New Delhi

