

**Core Course IV (CC) - Introductory Virology**

**UNIT – I**

Introduction – Definition, History of virology. General properties of viruses – cultivation of Viruses – Structure and replications viruses – classification of Viruses.

**UNIT - II**

Virus: Assay, purification and characterization of viruses, separation and characterization of viral components and quantification of viruses.

**UNIT – III**

Bacterial Viruses – structure of bacteriophage, The Lytic life cycle (T-Even coliphages) –Lysogenic life cycle (Escherchia coli, Phage Lambda).

**UNIT – IV**

Plant Viruses, common plant viral diseases : TMV, Bunchy top of banana, satellite virus, Viroid – Double standed DNA virus – Assay methods.

**UNIT – V**

Animal viruses : morphology, pathogenesis and laboratory diagnosis of prions, Rinder pest, Blue tongue, Raniket dion, Foot and Mouth Disease. Human Viruses – Herpes, HIV, Hepatitis Viruses. Viral Vaccines. Prevention and treatment of viral diseases. Antiviral agents.

**Reference:**

1. Alan J.Cann. (1997). Principels of Molecular virology.(2nd edition).Academic press, California.
2. Ann Giudici Fettner.(1990).The Science of Viruses.Quill, William Marrow, New York.
3. Dimmock N.J.Primrose S.B.(1994). Introduction to Modern Virology. IV edition. Blackwell scientific Publications, Oxford.
4. James, C. Cappuccino. (1996). Microbiology. The Benjamin/Cummings Pub. Co. California.
5. Morag, C. Timbury (1994). Medical Virology. X edition. Churchill Livingston.
6. Nicklin, J. Greame-Cook and Killington, R. (2003). Instant Notes in Microbiology.(2<sup>nd</sup> edition).Viva Books private limited, New Delhi.
7. Robert I. Krasner. (2002). The microbial challenge: Human Microbe Interactions, American society for Microbiology, Washington.
8. Roger Hull.2002.Mathews' Plant Virology.(4thEdition).Academic press-A Harcourt Science and technology company, New York.
9. Topley & Wilson's(1990). Principles of Bacteriology, Virology and Immunity. VIII edition Vol.IV Virology, Edward Arnold, London.