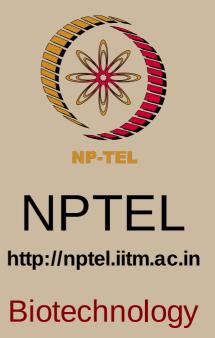
# General Virology - Web course

### **COURSE OUTLINE**

General Concepts: Virus history, Diversity, shapes, sizes and components of genomes. Isolation and purification of viruses and components. Consequences of virus infection to animals and human. Viral infection: affect on host macromolecules. Viral infection: establishment of the antiviral state. Viruses counter a t t a c k mechanisms. Classification of viruses and nomenclatures. +strand RNA viruses- Picornaviruses. Flaviviruses- West Nile virus and Dengue virus.

Coronaviruses- SARS pathogenesis. –ve strand RNA viruses-Paramyxoviruses. Orthomyxoviruses: Influenza pathogenesis and Bird flu. Rhabdoviruses: Rabies pathogenesis. dsRNA viruses- Reoviruses. Retroviruses: structure, classification, life c y c l e; reverse transcription. Retroviruses: HIV, viral pathogenesis and AIDS. Small DNA viruses: parvo- and polyomaviruses. Large DNA viruses: Herpes-adeno-, and poxviruses. Miscellaneous viruses.



### **Coordinators:**

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#### **COURSE DETAIL**

Module *	Topics and Contents	No of Lectures**
1	General Concepts: Virus history, Diversity, shapes, sizes and components of genomes. Isolation and purification of viruses and components.	6
2	Consequences of virus infection to animals and human. Viral infection: affect on host macromolecules. Viral infection: establishment of the antiviral state. Viruses counter attack mechanisms.	8

3	Classification of viruses and nomenclatures. +strand RNA viruses- Picornaviruses. Flaviviruses- West Nile virus and Dengue virus. Coronaviruses- SARS pathogenesis.	8
4	–ve strand RNA viruses- Paramyxoviruses. Orthomyxoviruses: Influenza pathogenesis and Bird flu. Rhabdoviruses: Rabies pathogenesis.	6
5	dsRNA viruses- Reoviruses. Retroviruses: structure, classification, life cycle; reverse transcription. Retroviruses: HIV, viral pathogenesis and AIDS.	6
6	Small DNA viruses: parvo- and polyomaviruses. Large DNA viruses: Herpes-adeno-, and poxviruses. Miscellaneous viruses.	6
	Total	40

\*Mid course examination after module 3 and finals after the completion of module 6.

\*\*Numbers of lectures are tentatively fixed.

## **References:**

- 1. <u>Principles of Virology</u> 2nd edition by S.J.Flint, L.W.Enquist, R.M.Krug, V.R. Racaniello, and A.M.Skalka.
- 2. <u>Fields Virology</u> 5th Edition by Bernard Fields, David Knipe and Peter Howley.
- 3. <u>Medical Virology</u> 4th edition by David O.White and Frank J. Fenner.

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