

Course contents for Virology

- 1. Faculty:** FLSB
- 2. Course Code:**
- 3. Course Title:** Virology
- 4. Number of Credits:** Two
- 5. Course objectives:**

This course will cover in-depth topics about the world of viruses. Are viruses alive? How do they look like? What are the different techniques used to identify, detect and grow viruses in the laboratory? What are the challenges being faced to cure Influenza, HIV, Hepatitis, Ebola, Zika, Dengue, Chikungunya and many other dangerous viruses you only hear and see in the news? Why and how viruses cause cancer? How to design strategies to target the virus without affecting host cells? How do antivirals act? What are the applications of viruses as vectors and in vaccines? In short, viruses are amazing! This course will help you to see the big picture of virology and think of virology as an integrative discipline. The course will involve theory classes, practical demonstration, group activities and movie screenings!

- 6. Minimum prerequisites for taking this course, if any:**

Basic knowledge in Molecular Biology.

- 7. Course structure with units, if applicable:**

- Virus- History and Discovery
- Virus Structure and Classification
- Virus Entry and Infection Cycle
- Working with Virus: Various Virological Methods
- Replication cycle of specific DNA and RNA viruses
- Viral Pathogenesis
- Host Defenses against Viral Infection
- Viral evasion of Immune System
- Viral Transformation of cells
- Viral Vectors and Vaccines
- Antiviral Agents

- 8. Suggested Readings:**

- Fields Virology: Vol.1 and 2
- Principles of Virology : J.H Flint
- Basic Virology : Edward Wagner
- Viruses: David Harper
- Fundamentals of Molecular Virology: Nicholas Acheson

- 9. Evaluation:**

Theory:	Mid-semester Written Examination	: 40% Marks
	End-semester Written Examination	: 40% Marks
	Quiz / Assignment/Presentation (oral / poster)/other	: 20% Marks