**Virology (A) (VIR. 312)**

**Overall aims of the Course:**

General Virology course provides a detailed study of viruses and their effects on living organisms. The course provides student of the veterinary medicine with a broad understanding of the nature and impact of viruses on animal welfare and human health by featuring the basic characteristics of animal viruses including structure, physicochemical and biological properties, replication, pathogenesis, oncogenesis, immunity, interference, and epidemiology. The course also features the classification schemes of viruses, principles of virus diversity and evolution, as well as the measures adopted to control virus infections such as vaccination and antiviral chemotherapy. The course is augmented with appropriate laboratory training and hands-on experiences that enable the student to design, practice, and evaluate the measures used in virus disease diagnosis.

**Course contents:**

* Historical Background
* Biosafety in the virology laboratory
* Virus structure
* General Scheme of Virus Disease Diagnosis
* Virus Multiplication
* Sampling for Virological Investigation
* Virus Genetics and Evolution
* Sample Preparation
* Pathogenesis of virus infections
* Virus Propagation in Embryonated eggs
* Viral Oncogenesis
* Virus Propagation in Embryonated eggs
* Immune response to viruses
* Isolation of viruses on cell cultures
* Vaccines and Vaccination
* Techniques in Cell Culture
* Epidemiology of Animal Viruses
* Virus-induced cytopathology
* Interferon and Interference
* Infectivity Titration
* Anti-viral Chemotherapy
* Plaque Assay
* Virus Classification