



MEDICAL VIROLOGY SUBJECT INSTRUCTIONS

Khder Hussein Rasul

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Practical Medical Virology and MA 403

Summer Term

First week

12/08/2024



- TISHK International University
- Department of Medical Analysis
- Subject: Medical Virology
- Grade: forth Stage
- Lecturer's name-Khder Hussein Rasul
- Academic Year: 2023/2024



- Department: Medical Analysis
- Course name: Medical Virology
- Lecturer: Khder Hussein Rasul
- Contact: e-mail: khder.rasul@tiu.edu.iq
- Time (in hours) per week: 2hr./ week



Course overview

This course provides an in-depth exploration of the field of medical virology, focusing on the study of viruses that impact human health. Explores basic virology, virus structure, virus replication strategies, international classification of virus, reaction to chemical and physical agents and molecular approaches to the development of viral vaccines.



The Course Keywords

- Virus
- Capsid
- Viral envelope
- Antiviral drugs
- Vaccination
- Pathogenesis
- Viral replication
- Viral genome



Course objectives

- Learn about viral laboratory instruments
- Get knowledge about ways of collection and transport viral samples
- Identify all the possible methods for diagnosis of virus
- Different structure and shape of virus
- Identify International classification of virus
- Learn about making of viruses



Student's obligation

- **Exam policy:**

Student should take exam during the course

- **Classroom polices:**

1. Attendance: students are strongly encouraged to attend in class on a regular basis, as participation is important to understanding of the material. This is students opportunity to ask questions. Students are responsible for obtaining any information during the class which provided.

2. Lateness: Lateness to class is disruptive

3. Electronic devices: Not allowed to use in the class.

4. Talking: During class, please refrain from side conversations. These can be disruptive to your fellow students



Forms of teaching

- Using power point
- White board
- Scientific animations during teaching time



Topics

- Medical virology instruction
- Viral laboratory instruments and safety cabinets
- Collection and transport of virological samples
- Serological viral detection in blood transfusion
- Understanding HIV antibody rapid cassettes: Fast and effective HIV testing
- Production of viruses and harvesting
- Concentration and titration of viruses
- Diagnosis of herpes simplex viruses
- Lentiviral vector
- Detection of Hepatitis B virus
- Detection of viruses by ELISA technique
- Detection of viruses by PCR technique
- Viral sequencing and genomic analysis
- Isolation of Bacteriophages from sewage water and its effect on bacteria
- Antiviral susceptibility testing
- Cultivation of viruses by cell culture technique
- Bioinformatic tools in medical virology