

Liverpool John Moores University

Title: PRINCIPLES OF VIROLOGY
Status: Definitive
Code: **7100VMBMOL** (123647)
Version Start Date: 01-08-2021

Owning School/Faculty: Pharmacy & Biomolecular Sciences
Teaching School/Faculty: Pharmacy & Biomolecular Sciences

Team	Leader
Jo Foulkes	Y

Academic Level: FHEQ7 **Credit Value:** 20 **Total Delivered Hours:** 42
Total Learning Hours: 200 **Private Study:** 158

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Tutorial	40

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Written examination	60	2
Essay	Essay	Essay	40	

Aims

1. To introduce students to the study of virus systematics and virus-host relationships
2. To provide students with the fundamental principles of immunology as related to virology
3. To extend knowledge and appreciation of the scientific principles used in the diagnosis of viral infections and related diseases

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate a systematic understanding of the basic structure and components of viruses and understand how these relate to classification and behaviour
- 2 Demonstrate a comprehensive understanding of the various components of the human immune system and explain how these relate to anti-viral function
- 3 Discuss the methods of viral transmission and replication in relation to disease and strategies for virus survival and mutation, and the roles of the immune system in these processes
- 4 Critically evaluate the types of virus-host relationships important in mammalian disease processes, with emphasis on the immunocompromised host

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Exam	1	2	3	4
Essay	1	2	3	4

Outline Syllabus

Classification and nomenclature of viruses

RNA and DNA virus replication

Viral structure and assembly

Viral transmission, barriers to transmission and incubation periods

Acute and chronic viral infections, persistence and latency, virulence, morbidity and mortality

Viral survival mechanisms including mutation, shift and drift and genome rearrangement

Zoonoses, epizootics and nosocomial infections

Components of innate and adaptive immune systems, with emphasis on roles of antibodies and cell-mediated immunity in viral clearance and recovery from viral infections

Mechanisms of viral infections and immunopathology

The consequences of immunodeficiency and autoimmunity in relation to viral infections with emphasis on the immunocompromised host

Passive and active vaccination

Immune responses to viral infections of the central nervous system

Learning Activities

Distance learning with tutorial support

Learning materials delivered by Virtual Learning Environment (Blackboard) to include directed reading, online lectures, online assessments with feedback, online discussions

Notes

There will be particular emphasis on developing independent learning skills and IT capability to access and extract relevant scientific information via Blackboard and databases available from LJMU. Online literature searches and evaluation of relevant scientific and popular literature will be key aspects, together with development of written communication skills.

This module will be offered as a single module CPD.

ADDITIONAL INFORMATION REQUIRED FOR SINGLE-MODULE CPD AWARDS (in lieu of a Programme Specification)

No specific benchmarks are available for this module, but the learning outcomes at least meet, if not exceed, those stipulated in the relevant qualification descriptors for a higher education qualification at level 7 (Master's degree characteristics) as defined by QAA, Sept 2015. The module has also been informed by the benchmark statement for Biomedical Science June 2015.

The module is delivered by Blackboard, which is supported by a Virology Tutor. Study mode is part-time distance learning and lasts for 1 semester. Attendance is only required for the module examination. Intake is every September.

The criteria for admission to the module require that candidates meet the criteria for admission to the MSc Virology programme (31066).

The final award is Continuing Professional Development in Principles of Virology, 20 credits at Level 7.

The students have access to a module Blackboard site and the University's other range of electronic support such as access to the electronic library facilities. The module content is regularly updated on the Blackboard site including contemporary reading lists and links to journal articles. Students have access to the community site for Virology. All students are assigned a personal Virology Tutor for support and guidance through the module, this maybe via email or online tutorials. There is also access to the module leader through phone contact and email. Module and CPD guides are also provided, which provide a range of information.

The programme is assessed and run in line with the Academic Framework <http://www.ljmu.ac.uk/eaqs/121984.htm>

The module is accredited by The Institute for Biomedical Science (Sept 2015- Aug 2020). The module forms part of the MSc Virology programme (30966) which was reviewed in June 2016.

The methods for improving the quality and standards of learning are as follows:

- Annual monitoring Review;
- Liaison and feedback from the students;
- Reports from External Examiner;
- Programme team ensuring the module reflects the values of the current teaching

and learning strategy;

- Module leader and/or Specialist Virology author updating knowledge and skills to ensure these remain current and relevant.

The module is included in the programme specification for the MSc Virology programme (31066). The module is aligned with the same MSc Virology module for annual monitoring and external examining purposes.