

BIOL 730 -- General Virology

Spring 2006

Ackert 221

MWF 9:30-10:20 a.m.

Instructors:

Dr. Rollie Clem Chalmers 268 532-3172 rclem@ksu.edu
Dr. Lorena Passarelli Chalmers 269 532-3195 lpassar@ksu.edu
Office hours: Appointments are preferred but walk-ins are also welcome

Textbook:

Principles of Virology: Molecular Biology, Pathogenesis, and Control of Animal Viruses
Authors: S.J. Flint, L.W. Enquist, V.R. Racaniello, and A.M. Skalka
2nd edition. Published in 2004 by ASM Press, Washington, DC ISBN 1-55581-259-7

Website:

Class materials will be posted on the K-State Online website (<http://online.ksu.edu>). Check the website often for important information and messages.

Course Objectives:

Traditionally, virology courses have focused on the differences between virus families. This course and textbook break from tradition and emphasize the similarities seen between the structure, replication, and pathogenesis of different groups of viruses, while still pointing out the interesting variations that are observed among unique viruses. This approach will result in a more thorough fundamental understanding of the molecular biology of viruses. In this course, students will learn about the properties of viruses, some of the techniques used to study viruses, and the molecular biology and pathogenesis of a number of specific animal and human viruses. Group discussion of case studies that address specific questions in virology will also be used to encourage in-class participation and discussion through active learning.

Grading:

The course is divided into four sections. Each section is worth 100 points, including one exam (80 points), one quiz (10 points), and one take-home exercise (10 points), for a total of 400 points for the entire course.

<u>Quizzes</u>		<u>Take-home assignments due</u>		<u>Exams</u>	
Quiz I	Feb. 1	Assignment I	Feb. 6	Exam I	Feb. 10
Quiz II	Feb. 27	Assignment II	March 3	Exam II	March 8
Quiz III	April 3	Assignment III	April 7	Exam III	April 12
Quiz IV	April 28	Assignment IV	May 3	Exam IV	May 11

Section I. Introduction to Virology (Rollie Clem), Chapters 1-4

January

13 (F)
16 (M) No class (Martin Luther King holiday)
18 (W)
20 (F)
23 (M)
25 (W)
27 (F)
30 (M)

History of Virology
Methodology
Properties of Viruses/Virus Structure
Overview of Virus Families

February

1 (W) **Quiz I**
3 (F) **Assignment I handed out**
6 (M) **Assignment I due**
8 (W)
10 (F) **EXAM I**

Section II. Molecular Biology of Virus Replication I (Lorena Passarelli), Chapters 5, 6, & 8

February

13 (M)
15 (W)
17 (F)
20 (M)
22 (W)
24 (F)
27 (M) **Quiz II**

Attachment & Entry
Genome Replication and mRNA Production by RNA Viruses
Transcription by DNA Viruses

March

1 (W) **Assign. II handed out**
3 (F) **Assign. II due**
6 (M)
8 (W) **EXAM II**

Section III. Molecular Biology of Virus Replication II (Lorena Passarelli), Chapters 7, 9-13

March

10 (F)
13 (M)
15 (W)
17 (F)
20 (M)
22 (W) } **Spring Break**
24 (F)
27 (M)
29 (W)
31 (F)

Reverse Transcription and Integration
DNA Replication
RNA Processing
Translational Control
Assembly & Release

April

3 (M) **Quiz III**
5 (W) **Assign. III handed out**
7 (F) **Assign. III due**
10 (M)
12 (W) **EXAM III**

Section IV. Medical Virology (Rollie Clem), Chapters 14-17, 19

April

14 (F)
17 (M)
19 (W)
21 (F)
24 (M)
26 (W)
28 (F) **Quiz IV**

Pathogenesis & Immunity
Vaccines and Antiviral Drugs
Specific Aspects of Selected Viral Diseases

May

1 (M) **Assign. IV handed out**
3 (W) **Assign. IV due**
5 (F)
11 (Th) **EXAM IV**

11:50 a.m. to 1:40 p.m., Ackert 221

Any student with a disability who needs an accommodation or other assistance with this course should make an appointment to speak with the instructor as soon as possible. It is expected that you do all academic work in this class individually. Do not collaborate on any academic work unless specifically approved by your instructor. On all assignments, examinations, or other course work, the following pledge is implied, whether or not it is stated: "On my honor, as a student, I have neither given nor received unauthorized aid on this academic work." For more information, please visit the Honor System web page at <http://www.ksu.edu/Honor>.