WRIGHT STATE UNIVERSITY

M&I 431/731 Basic Virology
(also cross listed as BMS 807)

CREDIT HOURS	3.0	DAYS	Tues/Thurs
LOCATION	Room A230 Creative Arts Bldg.	TIME	10:25 a.m. to 11:40 p.m.
INSTRUCTOR	Dawn P. Wooley, Ph.D. Room 016 Math & Micro Bldg. Phone: 775-4993; Fax: 775-3391 E-mail: dawn.wooley@wright.edu	OFFICE HOURS	11:40 a.m. to 12:40 p.m. on Tues. and also by appointment

COURSE DESCRIPTION

This course provides an introduction to the field of virology. The course emphasizes the intrinsic properties of viruses that cause human disease and their interaction with cells, multiplication, genetics, and tumor induction.

GOALS

This course is designed for undergraduate and graduate students who are learning about virology for the first time. The purpose of this course is to provide a foundation for the understanding of viruses that cause human disease.

TEXTS

Cann, A. J. 2005. *Principles of Molecular Virology*, Fourth Edition. Elsevier Academic Press, Inc., New York.

PERFORMANCE OBJECTIVES

At the conclusion of this course, the student will be able to:

- Know the taxonomy of human viruses that cause disease
- For each virus family, understand the following:
    - Viral Structure
    - Genetic composition
    - Mechanism of replication
    - Method of diagnosis
    - Molecular basis of pathogenesis
    - Epidemiology
    - Methods of prevention and control
- Describe persistent viral infections in humans
- Recognize human oncogenic viruses
- Compare and contrast the different virus families

GRADING POLICY

Award of letter grades, at course completion, reflecting the level of achievement of the course's performance objective is based on the scale:

A	B	C	D	F
100-90.00%	89.99-80.00%	79.99-70.00%	69.99-60.00%	<60.00%

Achievement is demonstrated through performance on the following measurement and learning devices:

Exam #1 30% Exam #2 30% Final Exam 30% Participation 10%

COURSE SCHEDULE

The class will meet two times per week for the quarter.

WEEK 1: CONCEPTS IN VIROLOGY (MARCH 31 AND APRIL 2)

Introduction • History • Definitions • Methods • Virus Structure

Chapters 1 and 2

WEEK 2: CONCEPTS IN VIROLOGY (APRIL 7 AND 9)

Genomes • Replication • Expression

Chapters 3 and 4

WEEK 3: CONCEPTS IN VIROLOGY (APRIL 14 AND 16)

Infection • Persistent Infection & Oncology • Documentary on Influenza

Chapters 6 and 7

WEEK 4: CONCEPTS IN VIROLOGY / DNA VIRUSES (APRIL 21 AND 23)

EXAM #1 (April 21) • *Herpesviridae*

WEEK 5: DNA VIRUSES (APRIL 28 AND 30)

Polyomaviridae • *Papillomaviridae* • *Poxviridae*

WEEK 6: DNA VIRUSES / RNA VIRUSES (MAY 5 AND 7)

Hepadnaviridae • *Adenoviridae* • *Retroviridae*

WEEK 7: RNA VIRUSES (MAY 12 AND 14)

EXAM #2 (May 12) • HIV-1 Lecture

WEEK 8: RNA VIRUSES (MAY 19 AND 21)

Orthomyxoviridae • *Paramyxoviridae* • Documentary on Hemorrhagic Fever Virus

WEEK 9: RNA VIRUSES (MAY 26 AND 28)

Filoviridae • *Coronaviridae* • *Picornaviridae* • *Flaviviridae* • *Rhabdoviridae*

WEEK 10: RNA VIRUSES (JUNE 3 AND 5)

Special Topics on Emerging Infectious Diseases

FINAL EXAM: THURSDAY, JUNE 11 AT 10:45 A.M. TO 12:45 P.M.

GRADUATE STUDENTS ONLY:

Special assignment to be announced.

DAWN P. WOOLEY, PhD, SM(NRM), RBP, CBSP