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**Biology Department, College of Arts & Sciences, Valdosta State University**

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**SPRING 2012----COURSE SYLLABUS\***

**BIOL 4510** Virology (CRN 21394) -- 3 credit hours

**BIOL 6510** Virology (CRN 21417) – 3 credit hours

**Class:** MW 3:30-4:45 pm, 2022 Bailey Science Center

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**Instructor:** Dr. Jenifer Turco

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**Office:** 2091 Bailey Science Center

**Office Hours:** Tues. 4:30-5:30 pm & Thurs. 12:30-1:30 pm; or by appointment.

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**Course Description:**

**BIOL 4510 Virology 3-0-3 (3 credit hours) Prerequisites: BIOL 3100 or consent of instructor.**

**BIOL 6510 Virology 3-0-3 (3 credit hours) Prerequisite: Admission into the graduate program or permission of the instructor.**

An introduction to viruses and other non-cellular infectious agents. Topics include the structure and composition of these agents, their replication, effects on their host, and host responses. Methods for studying these agents, their origins and evolution, and their uses in biotechnology will also be discussed.

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**Textbook:** **BASIC VIROLOGY, Third Edition**

by Edward K. Wagner, Martinez J. Hewlett, David C. Bloom, and David Camerini  
Blackwell Publishing 2008

**Other Materials:** Calculator that is not integrated with a cell phone

One CD (or jump drive) for oral presentation

One thin, light-weight folder for handing in assignments (No 3-ring binders, please)

Paper clips or stapler/staples for organizing references and assignments

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**SPECIAL NOTES TO STUDENTS:**

1. In order to respect the privacy of each student, exam scores and grades will not be posted, given out by telephone, or sent to students by email.

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## **COURSE OBJECTIVES**

After successful completion of this course, the student should be able to:

- (1) Describe the biochemical composition, replication strategies, functions, and significance of viruses and other non-cellular infectious agents.
- (2) Read and understand current scientific literature related to viruses and other non-cellular infectious agents.
- (3) Convey orally and in writing information from the scientific literature related to viruses and other non-cellular infectious agents.

### **Alignment of Assignments with Course Objectives:**

The course objective(s) aligned with each assignment are given on the last page of this syllabus.

### **Alignment of Course Objectives with Educational Outcomes:**

The **Student Learning Goals for the Core Curriculum in the University System of Georgia (USG)** are available online at <http://www.valdosta.edu/academic/VSUCore.shtml>. Each Core Area (A1, A2, B, C, D, and E) has one or more learning goals. There are also three additional learning goals for the Core Curriculum as follows: Learning Goal 1: US Perspectives (US Goal): Students will demonstrate an understanding of the United States and its cultural, economic, political, and social development; Learning Goal 2: Global Perspectives (GL Goal): Students will demonstrate an understanding of the cultural, religious, or social dimensions of societies around the world; and Learning Goal 3: Critical Thinking (CT Goal)

<b>Date</b>	<b>Topics</b>	<b>Related material in text</b>
Wed. Jan. 18	Viral pathogenesis	Chapters 2, 3, & 4

<b>Date</b>	<b>Topics</b>	<b>Related material in text</b>
Wed. Mar. 7	DNA viruses	Chapters 17 and 18
	SPRING BREAK	
Mon. Mar. 19	Retroviruses ***Term paper is due (BIOL 6510).***	Chapters 19 and 20
Wed. Mar. 21	Retroviruses Hepadnaviruses	Chapters 19 and 20 Chapter 21
Mon. Mar. 26	Viroids and prions Molecular genetics of viruses (selected topics)	Chapter 15 Chapter 22
Wed. Mar. 28	Molecular genetics of viruses (selected topics)	Chapter 22
Mon. Apr. 2	Molecular viral pathogenesis	Chapter 23
Wed. Apr. 4	Molecular viral pathogenesis Viral bioinformatics	Chapter 23 Chapter 24
Mon. Apr. 9	Viruses and the future Student oral reports (attendance required)	Chapter 25
Wed. Apr. 11	Student oral reports (attendance required)	
Mon. Apr. 16	Student oral reports (attendance required)	
Wed. Apr. 18	Student oral reports (attendance required)	
Mon. Apr. 23	Student oral reports (attendance required)	
Wed. Apr. 25	Student oral reports (attendance required)	
Mon. Apr. 30	Student oral reports (attendance required)	
<b>Fri. May 4</b>	<b>Comprehensive Final Exam 5-7 pm</b>	

**ATTENDANCE.** Attendance will be checked in class. As stated in the VSU Undergraduate Catalog, “A student who misses more than 20% of the scheduled classes of a course will be subject to receiving a failing grade in the course.” Students are required to attend and participate during all classes in which student reports are scheduled. Missing or not participating in more than two of these required classes during which student oral reports are scheduled will result in the loss of points as follows: fifty points will be deducted for each absence beyond the second absence.

**EXAMINATIONS.** Examinations may include questions of the multiple-choice, matching, true-false, short answer, problem, and essay formats. Three exams will be given (two exams plus the final exam). The second exam will be comprehensive in that up to 25% of the points on the exam may include material covered before the first exam. The final exam will be fully comprehensive. Each examination will be worth 220 points. A student should notify the instructor as soon as possible if he/she misses an exam. Arrangements for a make-up exam must be made within one week after the exam date; otherwise, a make-up exam will not be given. A make-up exam will be worth 185 points rather than 220 points, and it may consist entirely of questions of the short answer and essay formats. Cell phones may not be used during examinations or at any time in class.

**WRITTEN REPORTS.**

**BIOL 4510:** Each student must select and read two articles (approximately 3 to 10 pages per article) about viruses (published between 2006 and 2012) and submit a **complete** copy of each article plus a 2-page, typed, **double-spaced** report summarizing each article. These articles may include informal articles from *Science*

or other scientific publications, articles from *Scientific American*, short review articles from *Science* or *Emerging Infectious Diseases*, articles from *Morbidity and Mortality Weekly Report*, formal articles from other scientific journals, etc. Please note that these articles may NOT be any of the articles being used for the oral presentations.