

Mississippi College
Syllabus: Virology/BIO 5422
Spring 2014

Course:	Virology	Instructor:	R.C. Sample
Section/CRN:	BIO 5422/Z/22743	Email:	sample@mc.edu
Class Time:	Tues – Thurs/9:25 – 10:40pm	Phone:	Office: 601-925-7741
Location:	MSB 202	Office:	MS 217
Semester:	Spring 2014	Credit:	3 lecture hours
Office Hours:	As Posted		

Prerequisites: Graduate Standing in the Masters of Biology, Medical Sciences or Biological Sciences.; Lecture three hours a week;

Catalog Course Description: "A survey of bacterial, plant and animal viruses with an additional emphasis on pertinent aspects of molecular biology. A review of emerging and re-emerging viruses will be included as they currently relate to their ecological and human health impact."

Rationale: This course facilitates the study and understanding of pathogens that have become more clinically and ecologically relevant are central to the understanding of life, evolution and the historical relevance of the biological sciences. An understanding of illness and the pathophysiology of diseases in multiple organisms requires knowledge of virology. An understanding of how viruses interact with their hosts in a clinical and ecological manner is essential for professional and pre-professional programs in the life sciences and thus requires a rigorous knowledge of basic virology. The study of virology fulfills the mission of the college through the concentrated study in specialized fields, in this case virology.

I. Course Format: This course will be taught in the following lecture format, but the instructor reserves the right to change the format at any time to allow for the enhancement of the learning environment. This course will be presented in a lecture format supplemented with PowerPoint presentations, lecture notes, primary source articles, and internet information.

Section I: General Principles

0. History and Background of Virology
 1. Viruses and Their Importance
 2. Methods Used in Virology
 3. Virus Structure
 4. Virus Transmission

Lecture Exam I: **4 Feb 2014**

5. Attachment and Entry of Viruses into Cells
6. Transcription, Translation, and Transport
7. Virus Genome Replication
8. Assembly and Exit of Virions from Cells
9. Outcome of Infection for the Host
10. Classification and Nomenclature of Viruses

Lecture Exam II: **6 Mar 2014**

Short Communications Paper Due: **6 Mar 2014**

Section II: Virus Families

11. Herpesviruses (and Other dsDNA Viruses)
12. Parvoviruses (and Other ssDNA Viruses)
13. Reoviruses (and Other dsRNA Viruses)
14. Picornaviruses (and Other Plus-Strand RNA Viruses)
15. Rhabdoviruses (and Other Minus-Strand RNA Viruses)
16. Influenza Virus
17. Retroviruses
18. Human Immunodeficiency Viruses

Lecture Exam III: **10 Apr 2014**

19. Hepadnaviruses (and Other Reverse-Transcribing DNA Viruses)
20. Bacterial Viruses
21. Origins and Evolution of Viruses
22. Emerging Viruses
23. Viruses and Cancer
24. Survival of Infectivity
25. Virus Vaccines
26. Anti-Viral Drugs
27. Prions

Additional Topics and Primary Sourced Papers

Lecture Exam IV: **03 May 2014**

Paper must have the following:

Cover sheet (download format from website)

Rubric Sheet (download from website)

Abstract (300 words, download format from website)

Body of paper 4-5 pages in length

1" margins

11 or 12 font (Times New Roman, Courier New, Calibri and Arial are acceptable fonts)

No headers or footers

Page numbers will be in the center at the bottom of the page

References (for every internet source a student must have 2 peer reviewed journal articles)

Stapled in the upper left corner

DO NOT FOLD THE PAPER IN ANY WAY!

An electronic copy will be submitted and the file will be titled as follows:

BIO 5422 Virology Short Communications Paper **Last Name, First Name Virus Chosen** Spring 2014*

***If the file is not submitted with the above formatted title, there will be a deduction of 10% of the final possible points, and there will be a deduction of 10% of the final possible points if the paper is not submitted in Microsoft Word format.**

A rubric for grading of the paper will be downloadable from the website and will reiterate the format and standards for the grading of the paper. Deviations from format instructions will result in a deduction of points based on the number of deviations.

Objectives:

To provide the student with knowledge of:

1. virus importance in health and ecology.
2. the mechanisms of virus replication.
3. pathophysiology of virus induced disease.
4. select families of viruses with human importance.
5. theories on the origin and evolution of viruses.
6. oncoviruses.
7. vaccines developed to prevent viral infection and spread.
8. drug development and anti-viral drugs used to fight viral infection.
9. prions and their associated clinical conditions.
10. HIV/AIDS.

II. MATERIALS REQUIRED: The following list of materials will be needed for the completion of this course.

Virology: Principles and Applications, 2nd Ed, John Carter and Venetia Saunders, Wiley and Sons Publishers, 2012, (978-1-119-99142-7).

III. GRADING: Grading will be based on a point acquisition system. A student's grade will be based on the total number of points attained during the progress of the course and not the percentage score that they obtained on the materials attempted. The point breakdown is as follows for the materials that will be assigned in the course.

400 points	Lecture Exams (100 points each, 4 total)
100 points	Short Communications Paper (100 points each, 1 total)

500 points	Total points for the Course
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Scores:

450 – 500 points	90% - 100%	A
400 – 449 points	80% - 89.99%	B (B+ for 86.67% - 89.99%)
350 – 399 points	70% - 79.99%	C (C+ for 76.67% - 79.99%)
300 – 349 points	60% - 69.99%	D
0 – 299 points	0% - 59.99%	Failure of the Course

It is the belief of the instructor that attendance in class can be correlated to performance. If a student chooses not to attend lecture then their final grade could be impacted. Mississippi College requires students to attend 75% of all class meetings for courses they are enrolled in. If a student misses more than 25% the class meetings for a course they are to receive a failing grade based on attendance. Strict adherence to Mississippi College's class attendance policy is as follows: "Any student whose absences, whether excused or unexcused, exceed 25% of the class meetings will receive a grade of "F" in the course." Attendance in class is expected. The student (not the instructor) is responsible for any instructions, assignments, or work missed during an absence. Tests missed during an excused absence must be made up within one week. Tests missed during an unexcused absence will not be made up. **Refer to the Mississippi College Undergraduate Catalog for clarification of any point in relation to attendance.**

There will be no official final exam in that the forth exam will serve in place of the final exam.

Any missed assignments will be made up at a designated time and place as determined by the instructor. Make-up tests are more difficult since they must be formatted differently and include essay questions based on the instructor's discretion.

All materials will be handed in when the instructor specifies. If they are not handed in at the time designated, a 10% penalty will be assessed and an additional 5% per day penalty will be assessed until the assignment is presented to the instructor.

IV. **ACADEMIC INTEGRITY:** All students are expected to complete their assignments based on their own skills and knowledge, unless otherwise directed by the instructor. Studying as groups is highly recommended and suggested. However, quizzes and exams are not group projects; therefore, any academic dishonesty will be dealt with immediately and at the discretion of the instructor. All instances of academic dishonesty will also be reported to the department chair, the division and as appropriately to the college administration (to include the Dean of Academic/Student Affairs or other administrative officials) as necessary. The instructor also reserves the right to remove a student or students from the class as deemed necessary due to acts of academic indiscretion. Mississippi College students should display academic integrity in all situations. Honesty is expected from all students at all times. Dishonesty, such as cheating, plagiarism, and falsifying information, is a serious offense and is subject to severe penalty. Adherence to the Mississippi College "Honesty Policy" (Mississippi College Undergraduate Bulletin) will be followed. **Refer to the Mississippi College Undergraduate Catalog for clarification of any point in relation to Academic Integrity.**

V. **BEHAVIOR:** Any student can be removed from the class at the instructors discretion based upon behavior. If the instructor determines that a student's conduct is distracting or detrimental to the overall learning environment of the classroom, the student or students will first be informed of their unacceptable behavior and on a second occurrence will be removed from the class and only allowed to return after meeting with the department chair, the division and as appropriately with the college administration (to include the Vice President of Academic/Student Affairs or other administrative officials) as necessary. The instructor retains the sole right of refusal to allow a student back into the classroom after the student has been removed and dropped from the academic roster due to behavior problems.

Students are also advised that they are to come to the instructor first if there is a perceived problem. If the problem cannot be rectified at this level, a student is free to pursue rectifying the issue by meeting with the department chair, the division and as appropriately with the college administration (to include the Vice President of Academic/Student Affairs or other administrative officials) as necessary to try and reach an amicable solution. **Refer to the Mississippi College Undergraduate Catalog for clarification of any point in relation to Behavior.**

Cell phones will have all functions set on silent/vibrate during class. Students will not send text messages or answer calls during class. If it is an emergency you are instructed to leave the classroom in a manner as to

not disturb instruction. Other electronic devices will remain in backpacks, purses, etc. and not be placed on the desk or used during class unless specified by the instructor. If a student is found to be using any kind of electronic device during an exam, unless otherwise directed, will receive a score of zero (0) for the exam and could be referred to the Academic Counsel for further punitive measures.

Computers may be used during class, but if this privilege is abused by students not using their computers in relation to academic work, i.e., watching YouTube®, checking sports scores, instant messaging, surfing Facebook®, or any other related activity, the use of computers may be suspended during the remainder of the course.

Recording of the class is allowed for audio purposes. No video recording of any lecture will be permitted without the prior permission of the instructor. Violation of these policies will result in stern punitive action by the instructor to include, but are not limited to, removal of the student from the course, receiving a score of (0) on the subsequent exam, and/or referral to the department chair/dean for disciplinary action.

Early Alert System:

Mississippi College has adopted the practice of finding students early in the semester who may be exhibiting behaviors that could ultimately have a negative impact on their academic progress. These behaviors are often called “red flag” behaviors and include, but are not limited to, excessive absences, poor test grades, and lack of class participation or evidence of non-engagement. Identifying these behaviors early gives the instructor the opportunity to raise the “red flag” on behalf of a particular student so that the student can take the appropriate action to redirect his/her progress. The system alerts the student, the student’s advisor, and the Office of Student Success.

These messages are intended to help a student recognize an area of concern and to encourage him/her to make some choices to improve the situation. When a student receives an Early Alert message, the student should quickly make an appointment to talk with his/her professor about the situation. Also, students can make full use of the Office of Student Success to set academic goals and connect to campus resources.

Special accommodations at Student Counseling Services:

In order for a student to receive disability accommodations under Section 504 of the Americans with Disabilities Act, he or she must schedule an individual meeting with the Director of Student Counseling Services **immediately upon recognition of their disability** (if their disability is known they must come in before the semester begins or make an appointment **immediately** upon receipt of their syllabi for the new semester). The student must bring with them written documentation from a medical physician and/or licensed clinician that verifies their disability. If the student has received prior accommodations, they must bring written documentation of those accommodations (example Individualized Education Plan from the school system). Documentation must be current (**within 3 years**). The student must meet with SCS **face-to face** and also attend two (2) additional follow up meetings (one mid semester before or after midterm examinations and the last one at the end of the semester). Please note that the student may also schedule additional meetings as needed for support through SCS as they work with their professor throughout the semester. Note: Students must come in **each semester** to complete their Individualized Accommodation Plan (example: MC student completes fall semester IAP plan and even if student is a continuing student for the spring semester they must come in again to complete their spring semester IAP plan).

Student Counseling Services is located in Alumni Hall Room #4 or they may be contacted via email at ward@mc.edu. You may also reach them by phone at **601-925-7790**.

ALSO, 100% TUITION REFUND CANNOT BE MADE ON DROPPED CLASSES AFTER 21 JAN 2014, AND 0% TUITION REFUND AFTER 21 MARCH 2014.

A copy of this statement is attached on the following page and will be turned into the instructor:

I _____ have read and had explained all of the information and policies outlined in this syllabus. I understand that as a student, that by signing this acknowledgement, I am required to adhere to the policies outlined in this syllabus during the period of my enrollment in this course. If at anytime I feel that I have not been treated in accordance with these policies, I have the right as a student to meet with the instructor, the department chair, the division and as appropriately with the college administration (to include the Vice President of Academic/Student Affairs or other administrative officials) as necessary to rectify this problem.

Course Name: _____

Course Number: _____

Date: _____

I _____ have read and had explained all of the information and policies outlined in this syllabus. I understand that as a student, that by signing this acknowledgement, I am required to adhere to the policies outlined in this syllabus during the period of my enrollment in this course. If at anytime I feel that I have not been treated in accordance with these policies, I have the right as a student to meet with the instructor, the department chair, the division and as appropriately with the college administration (to include the Vice President of Academic/Student Affairs or other administrative officials) as necessary to rectify this problem.

Course Name: _____

Course Number: _____

Date: _____

Signature: