Biology 830P  Virology  3 hours credit  
Fall, 2012  
Dr. Brad Ericson, Instructor  
BHS 201E  
Phone: (308)865-8912  
email: ericsonb@unk.edu

Contact Hours:  M-F: 9:00 am to 4:00 pm central standard time (CST). I do not check email after 5:00 pm CST and rarely on weekends.

Announcements, assignments, tests, and quizzes: All information for this class will be available on blackboard (http://bb.unk.edu). You should check it regularly. 
E-mail: All students must use their UNK email account so that I can reach them. All emails to Dr. Ericson should be sent to his email account and not posted on blackboard.

Catalog Description
Prerequisites: A course in genetics and a course in cell biology or biochemistry is strongly recommended. An in-depth discussion of the principles of modern virology. Major topics of discussion will include: (1) virus replication strategies, (2) virus structure, (3) virus infection and disease, (4) and host resistance to disease. Fall semesters only.


Course objectives:

1. Understand the replication strategies of the major virus families and how they differ from each other.
2. Understand the organization of virus genomes and the various strategies for virus gene expression.
3. Understand the basic aspects of virus structure and assembly.
4. Understand the role of viruses in human disease.
5. Understand the role of viruses in medicine and society.
6. Understand virus control technologies.
7. Develop an ability to critically analyze the current literature on virology.

Students will achieve these objectives through lectures, online quizzes/tests, and discussion board participation.

Expectations: Grades are based on quizzes and exams. You are expected to participate on the discussion board, but this is not graded. The discussion board is designed for you to ask questions concerning the lecture material or make a post of a current event relating to virology. Do not post exam questions or quiz questions here. Use your private email account for this purpose.

My role in the course: Finally, a word about my role. Distance classes can be overwhelming for an instructor who tries to interact constantly with each student's postings. I will log in and read what you all post shortly after the posting. I will not, however, respond to each of your
postings. Frequently I will find comments or observations that you make of such interest that I will send an email to all of you commenting about these.

Grading will be based on departmental policy as follows: A+ (97-100%), A (96-94%), A- (93-90%) B+ (88-89%), B (83-87%), B- (80-82%), C+ (78-79%), C (73-77%), C- (72-70%) D+ (68-69%), D (63-67%), D- (60-63%), F (below 60%).

**Course Points:**

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<tr>
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<th>Points</th>
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<tr>
<td>Exams (four) @ 100 points</td>
<td>400</td>
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<tr>
<td>12 Quizzes @ 10 points (minus lowest 2 quizzes)</td>
<td>100</td>
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<td>Total Points</td>
<td>500</td>
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**Exams:** Exams may be composed of multiple choice, true/false, application problems, and/or short essays. I believe that virology and science exams in general should be an application of the material learned, and not simply rote memorization. The exams are not comprehensive, in that, the questions asked will specifically address material covered since the last exam or in the case of the first exam, material since the first day of class. The material on the test will include lecture material only. The multiple choice/true or false portion of the exam will be taken as a timed online portion. The amount of time allotted will be announced at the time of the test. If you run out of time while taking the test, you will not be given extra time. If you have a problem while taking your test, send me an email and I will deal with it as soon as possible. The computer displays a message to me that tells me what kind of problem you had, whether you took too much time or there was a computer problem. I will be available M-F from 9:00 am to 4:00 pm CST, but not constantly as I do have other teaching and research responsibilities. Everyone is expected to take all of the exams. **You must take all four exams to receive full credit. If you miss an exam, you will automatically fail and receive a letter grade of an “F”**. The dates for the exams are listed on the schedule. The exams will be made available at 8:00 am CST on Monday of the week listed and taken off at 11:55 pm CST on Sunday of the week listed. As an example, if the first test is put on blackboard at 8:00 am CST on Monday, September 27th, you would have until 11:55 pm CST Sunday, October 3rd to take it. **THE DEADLINE IS FINAL! THE EXAM WILL BE REMOVED AT 11:55 pm CST ON THE SUNDAY DUE DATE. MAKEUP EXAMS WILL BE GIVEN ONLY UNDER EXTREME OR EXTENUATING CIRCUMSTANCES, WHICH CAN BE DOCUMENTED! In any and all cases, the final validity and acceptability of any excuse for absence are at my sole discretion.**

**Quizzes:** Throughout the semester, you will be given 12 timed quizzes worth 10 points each. The quizzes will cover the book/lecture material. For all quizzes, you will be allotted 10 minutes to answer 10 multiple choice or true/false questions. All of the questions will be given at once. You will have only one chance to answer the question and will not be allowed to go back and change answers. Therefore, make sure to answer carefully. If we have done calculations in the lecture for a certain week, make sure to have a calculator with you at the time of the test. For quizzes with calculations, you will be allotted extra time. If you run out of time while taking the quiz, you will not be given extra time. If you have a problem while taking your quiz, send me an email and I will deal with it as soon as possible. The computer displays a message that tells us
what kind of problem you had, whether you took too much time or there was a computer
problem I will be available M-F from 9:00 am to 4:00 pm CST, but not constantly as I do have
other teaching and research responsibilities. The dates for the quizzes are listed on the schedule
and will be made available at 8:00 am CST on the three days prior to the due date. You have
until 11:55 pm CST on the due date to take the quiz. **THE DEADLINE IS FINAL! THE
QUIZ WILL BE REMOVED AT 11:55 pm CST ON THE DUE DATE.** The purpose of
these quizzes is to make sure that you are keeping up with the course material.

**General Discussion Board:** This discussion board will be for introductions, general questions,
and questions over lecture. This discussion board will **not be graded.** If you have questions
about lecture material, please post it here. In my experience, if you have a question about the
material, so does everyone else! **Do not post questions about the quizzes or tests here.** If you
have a question about a quiz or test you have taken, email me directly. If it is something that
should be shared with the rest of the class, I will post it. **Even though the Discussion Board is
not graded, you are still responsible for any and all materials that are posted there. Check
it regularly.** Also, if you do not participate on the Discussion Board, do not ask me to alter your
grade at the end of the semester. If you have an 89.9% as a final percentage and have not
participated on the Discussion Board, you get a B+, not an A-. The Discussion Board is also a
great place to post current events that involve viruses. Please bring items such as these to the
attention of the class.

**Bonus Points or Extra Credit:** Due to confusion about this policy, no extra credit or bonus
points will be made available. The only consideration of bonus points will be based on
Discussion Board participation (see above). The extent of this participation is at the sole
judgment of the instructor.

**Students with Disabilities**

Students with disabilities are encouraged to contact me for a confidential discussion of their
individual needs for academic accommodation. It is the policy of the University of Nebraska at
Kearney to provide flexible and individualized reasonable accommodation to students with
documented disabilities. To receive accommodation services, students must be registered with
UNK Disabilities Services Coordinator, David Brandt, in the Academic Success Office, 163
Memorial Student Affairs Building, 308-865-8214 or by email brandtdl@unk.edu.

**Policy on incomplete:** To be considered for an incomplete in Biology 830P:

1. You must submit the reasons you cannot complete the scheduled work. This must include a
   copy of your class schedule and description of your responsibilities outside the classroom.
   This should be done in writing and include confirmation from your employer when
   appropriate.

2. You must specify the assignments you have missed and a schedule of plans to complete them.
3. You must submit a copy of the above information to the Chair of the Department of Biology and the Dean of Natural and Social Sciences.

4. Upon completion of items 1-3, your request for an incomplete will be considered. I expect all students to progress through the requirements for Biology 830P in a timely fashion. Unless your circumstance is quite remarkable, do not consider an incomplete.

**Plagiarism and cheating:** Neither will be tolerated! Anyone caught plagiarizing any exercise or cheating on any exercise will receive a 0 for that exercise; subsequent violations will result in referral to the Vice Chancellor for Academic Affairs for dismissal from the university.

**Course Schedule—Completion date follows each chapter. You need to have read the chapters and try to complete the lectures listed by these completion dates in order to be prepared for the weekly quiz.**

Lecture #1  Introduction to Viruses  8/25
Lecture #2  Eukaryotic Molecular Biology and Host Cell Constraints  8/31
Lecture #3  Virus Replication Cycles  9/7
Lecture #4  Virus Architecture and Nomenclature  9/11
Lecture #5  Laboratory Diagnosis and Viral Diseases  9/16
Exam I  100 Points  9/23
Lecture #6  Mechanism of Viral Entry and Spread of Infection in the Body  9/25
Lecture #7  Host Resistance to Viral Infections  10/1
Lecture #8  Epidemiology  10/6
Lecture #9  Viruses and Cancer  10/11
Lecture #10  Poliovirus and Other Enteroviruses  10/16
Exam II  100 Points  10/21
Lecture #11  Influenza Viruses  10/27
Lecture #12  Rabies  11/1
Lecture #13  Poxviruses  11/7
Lecture #14  Herpesviruses  11/14
Exam III  100 Points  11/18
Lecture #15  Human Immunodeficiency Virus (HIV)  11/26
Lecture #16  Hepatitis Viruses  11/30
Lecture #17  New Viruses and Viruses That are Reemerging  12/5
Lecture #18  What about Prions and Viroids?  12/9
Final Exam 100 Points  12/16
Quiz and Exam Schedule (see above for instructions and policies). The dates given for the quizzes (Q) are the completion dates. You must, for example, have Q1 completed by Wednesday, August 29th at 11:55 p.m., CDT.

Q1. August 29th
Q2. September 5th
Q3. September 12th
Exam I September 17th-23rd

Q4. September 30th
Q5. October 5th
Q6. October 10th
Exam II October 17th-23rd

Q7. October 31st
Q8. November 5th
Q9. November 11th
Exam III November 15th-20th

Q10. November 30th
Q11. December 9th
Q12. December 13th
Exam IV December 10th-16th