



## BSC 530 –Virology Syllabus (Spring, 2014)

Instructor: Dr. Andrei Kochegarov, Mon, Wed, Fri, 10:00-10:50am

Classroom Location: BA 258

Office: 255 McFarland Science Bldg (STC)

Phone: 903-886-5602

Email: Andrei.Kochegarov@tamuc.edu

Office Hours: 2 – 6pm, Mon, Wed, Fri. or by appointment

### Class Schedule

Jan 13-17, Chapter 1-3

Jan 20-24, Chapter 4-5

Jan 27-31, Chapter 6-7

#### **Exam 1 Feb 3**

Feb 3-7, Chapter 8-9

Feb 10-14, Chapter 10

Feb 17-21, Chapter 11

Feb 24-28, Chapter 12

#### **Exam 2 March 3**

March 3-7, Chapter 13

#### **March 10-14, Spring Break**

March 17-21, Chapter 14

March 24-28, Chapter 15-16

March 31-April 4, Chapter 17-19

#### **Exam 3 April 7**

April 7-11, Chapter 20-21

April 14-18, Chapter 22-23

April 21-25, Chapter 24-25

April 28-May 2, Chapter 26-27

#### **Final exam**

*All dates and assignments are tentative and subject to change.*

Textbooks:

#### **Virology – Principles and Applications**

(This book is *in print* so the new edition may not be available especially when you are trying to buy this book more than a month earlier than our class start date. If that's the case, you can purchase older edition as below)

John Carter & Venetia Saunders. 2007. Virology – Principles and Applications. 1st Ed., John Wiley. ISBN: 978-0-470-02387-7

Although above textbook will be the main source of my lecture, I often use other sources to provide better information.

### Course Description

BSc 530, Virology, is a course for Biological and Environmental Sciences graduate students designed to provide in-depth understanding of the significance of viruses to biology, the origin of life, and our current world. Viruses are the most numerous and the most ubiquitous form of life, although whether viruses are life or not is still an open debate. They are virtually everywhere and they are in tight relationship with other forms of life on earth. Topics covered in this course will include introduction to viruses, eukaryotic molecular biology, and host cell constraints, viral replication cycles, virus classification, architecture and nomenclature, viral diseases, how viruses enter and spread in the human body, host resistance to viruses, viral disease epidemiology, viruses and cancer, and prions.

### Student Learning Outcomes

Upon completion of this course, you should be able to;

- Describe the structure and function of viruses
- Distinguish diverse characteristics of viruses – host range, target tissues, replication strategy, transmission, etc.
- Develop an awareness of the impact of viruses on other forms of life
- Describe the role of viruses in human diseases

### Classroom Policy

- For successful course completion, your presence and participation is essential. Your attendance grade will be determined by your presence, your participation in class discussion, and your attention to the class discussion, whether by the instructor or a fellow student.
- Students should arrive ON TIME. Late arrivals are NOT acceptable.
- Students are expected to read the assigned textbook material prior to the class.
- To create a pleasant learning environment, students MUST turn their cell phones and other potentially disruptive electronic devices. Only laptop computers are allowed to take class notes. Those laptop computers should be operated with MUTE function on (i.e. sound off). Remember, laptop is only for taking notes. You give up the privilege of using your laptop computers in class if you caught using your computer for other activities such as reading emails, chatting, watching videos, etc.

### Grading Policy

Grade portion consists as below;

Topic Presentation	= 100 points
3 Mid-term and final exams (100 pts. each)	= 400 points
Total	= 500 points

### Grading Scale

The final course grade will be assigned based on the following break-down;

90 – 100%	= A
80 – 89%	= B
70 – 79%	= C

60 – 69% = D

59% and below = F

### Teaching Methodology

**Web-Enhanced Course** Classroom lecture will be supplemented with lecture slides and answer keys for quizzes and exams via eCollege. Students are strongly encouraged to print lecture slides (4-6 slides per page) prior to the class and bring to the class. Periodically check course homepage as well as your email for course announcements.

**Topic Presentations** Each student will give a presentation summarizing his/her chosen topic and lead class discussion. The summary should include i) the nature of virus, ii) their route of transmission and mechanisms of pathogenesis, iii) Diagnosis, iv) Treatment and prevention v) One exemplary clinical case study. The presentations should be well-prepared, concise, and include sufficient visual aids. The presentation will be evaluated by your classmates (40%) and the instructor (60%). Topics are;

dsDNA viruses: Herpes viruses, Epstein-Barr virus and others.

ssDNA viruses - Parvoviruses

dsRNA viruses-Reoviruses

ssRNA (+) viruses: Picornaviruses

ssRNA (-) viruses: Rhabdoviridae (rabies), Paramyxoviridae (respiratory syncytial, measles), Filoviridae (Ebola), Bornaviridae (Borna disease) Your topic selection comprises 10% of your topic presentation grade (i.e. 10 pts out of 50). To earn your topic selection points, you have to submit a PDF file of your case study source. Your case study source should be a scientific journal article.

**Mid-term Exams** There will be 3 mid-term exams. The exams will consist of multiple choices and short answer questions. Large portion of EXAM questions will be drawn from the same test pool as quiz pool. Thus, make sure to study materials covered by quiz-pool first. Mid-term exams will be taken in class hours.

**Comprehensive Final** The final exam will consist of multiple choices and short answer questions. The exam will cover all class materials covered through the semester with emphasis on materials not covered by mid-term exams (70% from materials covered by mid-term exams and 30% from materials NOT covered by mid-term exams). Large portion of Final Exam questions will be drawn from the same test pool as Mid-term pool. Thus, make sure to study materials covered by those pools.

**Makeup** The student is responsible for requesting a makeup when they are unable to take the regularly scheduled exams. The request should be made within 3 days of the absence. Makeup exams will be scheduled only in the event of EXCUSED absence (as defined in the Student's Guidebook). If the test is not made-up, the student will receive Zero for that exam. No make-ups for quizzes. Excused absences include;

- Verified illness (with Doctor's note)
- Death in a student's immediate family
- Obligation of student at a legal proceedings in fulfilling responsibility as a citizen
- Elective TAMUC activities (with the activity director's note)

### University Statements

**Academic integrity:** As members of Texas A&M University-Commerce academic community, we all are responsible to underpin the principles of academic integrity expressed by this community. We are expected to watch these principles to be kept and appreciated by others.

- The first instance of cheating will result in an automatic Zero on the exam. A second instance will result in Zero course grade (automatic F).
- Plagiarism is a serious academic criminal activity. You must cite all sources of information with properly accredited. Copying material, whether parts or whole, will

result in Zero for your term paper and can incur in further University disciplinary consequences.

**Accommodations:** The American with Disability Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other aspects, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have disability requiring accommodation, please contact:

Office of Student Disability Resources or Services  
Texas A&M University-Commerce  
Gee Library, Room 132  
Tel) 903-886-5150, 903-886-5835  
Fax) 903-468-8148  
Email) StudentDisabilityService@tamu-commerce.edu

**Access to student work:** Copies of your work in this course including copies of any submitted papers and your portfolios may be kept on file storage for institutional research, assessment, and accreditation purposes. All work used for these purposes will remain anonymous.

**Spring2014 payment information:**

Late payment	Jan. 11, 2014
Late registration	Jan. 15, 2014
Drop for non-payment	Jan. 30, 2014

**Texas A&M University-Commerce**

2600 S. Neal St, Commerce, TX 75429-3011  
Biological and Environmental Sciences  
Tel) 903-886-5378 Fax) 903-886-5997