



## **Texas A&M University-Commerce**

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Biological and Environmental Sciences  
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### **BSc 430 – Virology** Syllabus (Fall 2012)

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Office Hours: 12-2, MWF

12:00 – 12:50, MWF  
Classroom: STC 123

#### 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@tamuc.edu](mailto:StudentDisabilityService@tamuc.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.

### Course Description

BSc 430, Virology, is a course for junior or senior biology undergraduate students designed to provide general 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, laboratory diagnosis of viral diseases, how viruses enter and spread in the human body, host resistance to viruses, epidemiology viruses and cancer, and prions.

Prerequisite:

BSc 306, Applied Microbiology

### **REQUIRED Textbook:**

Viruses (Biology/Applications/Control)

David R. Harper. 2011. Viruses: Biology, Application, and Control. 1st edition. Garland Science. ISBN: 978-0-8153-4150-5

Other e-book options for Viruses textbook:

- eBook purchase: \$66.00
- 1 year e-rental: \$57.00

To purchase or rent the e-book at the VitalSource store go to:

<http://store.vitalsource.com/show/978-1-1366-6542-4>

### 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 aiding our understanding of basic biological principles

### 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;

Term paper (see details below)	= 100 points
Presentation	= 50 points
2 Mid-term exams (100 pts. each)	= 200 points
Comprehensive Final	= 150 points
5 quizzes (10 pts. each)	= 50 points
Attendance	= <u>50 points</u>
Total	600 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.

**Term paper** Write a review article on one of the current research topics related to microbial diversity. Topic selection by the end of the second week and the paper is due by the end of the week prior to the Thanksgiving break.

- Contents of the paper: Discuss your chosen “special topic” related to viruses, with sufficient discussion of background information to allow anyone taking the class to understand the significance. The length of the paper is minimum 10 pages of double-spaced text. You can provide figures. Write with your classmates as the targeted readers. You should not “reuse” a topic used for other courses.
- Sources and their use: In recent years there has been a tendency to rely more heavily on web pages as sources. Students are warned that plagiarizing any source is a serious violation of academic standards—credit and use your sources properly. A definition of plagiarism can be found in the section of University Statement. **\*\*Note:** I allow the use of some figures downloaded from the web, but you should cite the

reference or give the website. Figure legends should be your own with succinct and clear information.

- ***Style:*** Papers will be judged on their organization and the clarity of writing. Papers that have numerous misspellings or grammatical errors will be rated poorly and this rating will seriously impact the grade. Proofread carefully. Use spelling checkers. Have others read the paper both for clarity and content. The paper should follow a review paper writing style with citation systems of either Citation-Sequence or Name-Year.

***Term-paper Presentations*** Each student will give a 10 minute presentation followed by 2 – 3 minutes questions/answers. The presentations should be well-prepared, concise, and include sufficient visual aids. The presentation will be evaluated by your classmates (60%) and the instructor (40%).

***Mid-term Exams*** There will be 2 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 and Quiz pool. Thus, make sure to study materials covered by those pools.

***Quizzes*** There will be 5 quizzes given during the semester. Quiz schedule will be announced during class hours one week prior to the quiz. A typical quiz comprises seven 1-point questions. You will get 3 points by simply taking the quiz.

***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.

### *Class Schedule*

Week 1

Introduction and Chapter 1

Week 2

Chapter 1

**Topic Due**

Week 3

Chapter 2

Week 4

Chapter 3

Week 5

Chapter 4

Week 6

**Exam I (Chapter 1 ~ 4)**

Chapter 5

Week 7

Chapter 5

Week 8

Chapter 6

Week 9

Chapter 7

Week 10

Chapter 8

Week 11

**Exam II (Chapter 5~8)**

Chapter 9

Week 12

Chapter 9

**Term paper due**

Week 13

Chapter 10

Thanksgiving holiday – short week

Week 14

Chapter 10

RESERVED for student presentations

Week 15

RESERVED for student presentations

**Week 16 (8:00 – 10:00 AM, Fri, Dec 14)**

**Final Exam (Comprehensive, Chapter 1 ~ 10)**

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