



**Course** **BIOL-2350, BIOLOGICAL BASIS OF HEALTH AND DISEASE (Sec 001, 002)**  
**Professor** Dr. ILYA SAPOZHNIKOV, M.D., Ph.D.  
**Term** SPRING, 2017  
**Meetings** **Sec 001** *TTh 4.00-5.15 PM, CB 3, 1.306;*  
**Sec 002** *MW 2.30-3.45 PM, SLC 2.202;*

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#### **Professor's Contact Information**

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THE **LEAD TA** FOR BOTH SECTIONS:  
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**Teaching Assistants, SEC 001 (Tue/Thurs Section)**  
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#### **Other Information**

*Please make use of the email addresses listed above (based on your section) for contact with the Instructor and TAs. **Do NOT** contact TAs or the Instructor by Elearning mail, but by your UTD e-mail client (Galaxy/Zmail).*

*Make use of the Elearning discussion board to interact with fellow students. Be aware that this is intended for student use, but is also monitored by TAs and your instructor.*

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## **General Course Information**

### **Pre-requisites, Co-requisites, & other restrictions**

The course is designed as a science elective open to all majors.

### **Course Description**

The main goal of the course is to make the students aware of the fundamentals of pathophysiology, which focuses on the mechanisms of the diseases. These mechanisms are “the dynamic processes that (1) cause disease, (2) give rise to signs and symptoms, and (3) signify the body’s attempt to overcome disease” (M. Hansen, 1998).

### **Learning Outcomes**

The content of the course is chosen to cover conditions, which may affect dramatically the life of an individual and society in modern age. Special emphasis will be given to the preventative aspects of each disease based on non-drug, wellness-promoting approaches. The main outcomes of this course consist in the ability of the students (1) to interpret the pathological conditions of the human body as a result of a misbalanced local and systemic homeostasis; (2) to compare the normal and abnormal responses of the human organism to the different stimuli; (3) to explain the mechanisms of the effects of the specific and non-specific preventative measures; (4) to apply the obtained knowledge to their everyday life experience, using it as a tool for the primary and the secondary prevention of many diseases.

### **Required Texts & Materials**

**Pathophysiology. Concepts of Altered Health States, by Sheila C Grossman, Carol Mattson Porth; Ninth Edition( ISBN 978-1-4511-4600-4).**

The following are some websites that provide supplemental information on the issues discussed in the “Biological Basis of Health and Disease” course.

**[http; //www.](http://www.ama-assn.org/)**

1. [ama-assn.org/](http://ama-assn.org/) American Medical Association/JAMA
2. [americanheart.org](http://americanheart.org) American Heart Association
3. [cdc.gov/](http://cdc.gov/) Centers for Disease Control and Prevention
4. [healthfinder.gov](http://healthfinder.gov) Government-sponsored mega site
5. [mayohealth.org](http://mayohealth.org) Mayo Clinic
6. [ncbi.nlm.nih.gov/Pubmed/fulltext.html](http://ncbi.nlm.nih.gov/Pubmed/fulltext.html) Medline online journal links
7. [nih.gov](http://nih.gov) National Institutes of Health
8. [pharminfo.com](http://pharminfo.com) Pharmaceutical
9. [rxlist.com](http://rxlist.com) Drugs
10. [sciam.com/](http://sciam.com/) Scientific American online

### **Suggested Texts, Readings, & Materials**

## **Assignments & Academic Calendar**

*[Topics, Reading Assignments, Due Dates, Exam Dates]*

**Please note the appropriate date for your exams based on your section number.**

**Section 001 is the Tue/Thurs section**

**Section 002 is the Mon/Wed section**

Your exam dates are listed next to your section number in the left column. Please make note of your dates and mark in your calendar.

**All exams are taken on a scantron.** You will need the pink/red/white scantron labeled **ParScore Form No. F-1712-PAR-L**. *\*Tip: pick up 7 scantrons at off campus books or the UTD bookstore PRIOR to the first exam. This will ensure that you have them for every exam without chancing that supplies run out.*

**Reading Assignments:** In order to best understand the material presented in lecture, read the assigned chapters prior to class.

### **UNIT REVIEWS**

**1.The attendance of the Unit Review Sessions is Required (they take place during regular lecture times).** A hard copy is due at the beginning of the Review Session. **(No e-mail reviews will be accepted).**

2. You will need to print off two copies, one to submit (with your name) and another to take additional notes during the Review Session. If you have answered no less than 70% of the review questions correctly, we will add 3 points to the grade of this particular Unit Exam.

3. The failure to submit the review answers will result in a deduction of 5 points (-5) from your Unit Exam grade.

<b>The weeks of January 8, 15, 22, 29, 2017</b>	<b>Unit 1:</b> The introduction to the course. Mechanisms of Infectious Disease. Immunity and Inflammation. Alterations in the Immune Response. Acquired Immunodeficiency Syndrome-AIDS. Chapters 12, 13, 14, 15, 16.
<b>Sec 002-2.1.17; Sec 001-2.2.17;</b>	<b>Unit Exam # 1(Chapters 12-16)</b>
<b>The weeks of February 5,12,19, 2017</b>	<b>Unit 2:</b> Alterations in Structure and Function of the Female and Male Reproductive Systems. Sexually Transmitted Diseases. Chapters 51, 52, 53, 54, 55.
<b>Sec 002- 2. 22. 17; Sec 001-2.23.17;</b>	<b>Unit Exam #2 (Chapters 51-55)</b>
<b>The weeks of February 26, March 5,19, 2017</b>	<b>Unit 3:</b> Alterations in Blood Flow in the Systemic Circulation. Alterations in Blood Pressure: Hypertension & Orthostatic Hypotension. Alterations in Cardiac Function. Atherosclerosis. Coronary Heart Disease. Heart Failure and Circulatory Shock. Chapters 29, 30, 31, 32, 33, 34.
<b>Sec 002-3. 22. 17; Sec 001- 3. 23.17;</b>	<b>Unit Exam # 3( Chapters 29- 34)</b>
<b>The weeks of March 26, April 2, 2017</b>	<b>Unit 4:</b> Alterations in Respiratory Function. Respiratory Tract Infections, Childhood Disorders. Alterations in Ventilation and Gas Exchange. Obstructive

	Airway Disorders. Bronchial Asthma. Impaired Gas Exchange and Respiratory Failure. Chapters 35, 36, 37.
Sec 002-4. 3.17; Sec 001- 4.4.17;	<b>Unit Exam #4 (Chapters 35-37)</b>
The weeks of April 2,9, 23, 2017	<b>Unit 5:</b> Alterations in Renal Function. Urinary Tract Infections. Disorders of Glomerular Function. Renal Failure. Alterations in Urine Elimination. Chapters 38, 39, 40, 41, 42, 43.
Sec 002-4.26.17 Sec 001-4.27.17	<b>Unit Exam # 5 (Chapters 38- 43);</b>

**Final Exam Time and Date: Based on University Final Exam Schedule.**

## **FINAL EXAM (Comprehensive)**

### **The date will be announced**

*Our final exam times are based on the UTD published finals schedule. If you have an instructor who varies from the University exam schedule, creating conflict with this scheduled time, you will need to contact that instructor to make alternate arrangements. You must be present for your final exam at the stated time listed based on your section assignment!*

*Due to classroom seating limitations and fairness to all students, we are unable to let you take your final exam earlier or later than the schedule dictates for your section. Do not assume you can take the exam with the other section...You are required to show up for testing on your scheduled date or you will be turned away.*

### **Course Policies**

<b>Comet Creed</b>	<p><i>This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:</i></p> <p><i>“As a Comet, I pledge honesty, integrity, and service in all that I do.”</i></p>
<b>UT Dallas Syllabus Policies and Procedures</b>	<p><i>The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.</i></p> <p><i>Please go to <a href="http://go.utdallas.edu/syllabus-policies">http://go.utdallas.edu/syllabus-policies</a> for these policies.</i></p>

***The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.***