

Mission 12—Patho and Host Defense & Pathophysiology

BS in Biomedical Sciences**Mission 12—Pathobiology and Host Defense & Pathophysiology****Mission Equivalency: 3101 & 4295****Spring 2017: 1/19-5/12**

***This syllabus represents the current mission plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.*

TEXTBOOK AND/OR RESOURCE MATERIAL

All required content for this mission is paid for via mission fees and is delivered via iPad, which will be issued to you at your orientation meeting for the program. This learning material will include carefully curated readings, video, interactives, animations, apps, and other sources.

The following materials, and many others, are included:

- Kumar V, Abbas AK, Aster JC. *Robbins and Cotran Pathologic Basis of Disease*. 9th ed. Philadelphia, PA: Saunders; 2015.

Mission Description and Prerequisites

Welcome to the next step of your journey into the world of the biomedical sciences. As you reach each of your learning goals, you will develop the knowledge and skills necessary to contribute to the health and well being of many members of your community. You will also learn what the professionals in the field know about the inner workings of the human body and medicine. It will be a fascinating trip through one of the fastest growing areas of scientific study. In this mission, you will:

- Gain a foundational basis for the pathobiology and pathophysiology of disease processes in multiple organ systems
- Correlate clinical aspects of disease with morphology, pathobiology, and underlying pathophysiology
- Apply the principles and knowledge disease mechanisms to solve medical case studies
- Consider treatment options based on disease mechanisms and presenting symptoms in medical case studies

Prerequisites for the course include:

- Admission into the BMED program
- Successful completion of previous missions

LEARNING OBJECTIVES/OUTCOMES FOR THE MISSION

As you complete the activities in this mission, you will work toward demonstrating competence in each of these programmatic objectives:

- 1.B: Apply knowledge of biology in defining and discussing basic biomedically-related science concepts. (Level 2)

Mission 12—Patho and Host Defense & Pathophysiology

- 1.C: Apply knowledge of chemistry and organic chemistry in defining and discussing basic biomedically-related science concepts. (Level 2)
- 1.D: Apply knowledge of physics in defining and discussing basic biomedically-related science concepts. (Level 2)
- 2.A: Describe the structure and function of the body and explain the basis of major pathologies and diseases at the molecular, cellular, organ, and system levels. (Level 2)
- 2.B: Critically examine the science behind disease prevention and health promotion, especially as related to common chronic conditions. (Level 1)
- 3.A: Describe and discuss relevant psychological and sociocultural influences on individual perception and reaction to stimuli. (Level 2)
- 3.B: Apply the psychological and sociocultural influences on individual behavior and mechanisms for behavioral change. (Level 2)
- 4.A: Describe the social and environmental determinants of health and their influences on healthcare and biomedical research and discuss related impacts on individuals, communities, and populations - regionally, nationally and globally. (Level 1)
- 4.B: Compare and contrast communities and populations that are frequently marginalized, vulnerable, subject to health disparities or barriers to care; describe the social, economic, and policy factors affecting the care of these communities and populations; and identify potential points of access for advocacy. (Level 1)
- 5.B: Review and evaluate prior research and related literature, and defend a rationale for which sources should be referenced. (Level 1)
- 6.C: Relate knowledge of epidemiology and biostatistics to understand disease patterns. (Level 1)
- 9.A: Demonstrate a desire to help others and sensitivity to others' needs and feelings. (Level 1)
- 9.C: Demonstrate ability to work collaboratively with others to achieve shared goals. (Level 2)
- 10.A: Behave in an honest and ethical manner; cultivate personal and academic integrity and adhere to ethical principles and follow rules and procedures. (Level 2)
- 10.B: Consistently fulfill obligations in a timely and satisfactory manner; take responsibility for personal actions and performance. (Level 2)
- 10.C: Set goals for continuous improvement and for learning new concepts and skills; solicit and respond appropriately to feedback. (Level 2)
- 10.D: Appropriately utilize campus, community, and other resources to help one succeed in the university setting, including progressive awareness of how and when to seek academic assistance or other professional support. (Level 2)
- 11.A: Effectively and confidently convey information to others through powerful written communication in academic, professional and informal communication settings. (Level 2)
- 12.A: Effectively and confidently convey information to others through oral communication. (Level 2)

GRADING POLICIES

You will demonstrate your achievement of program competencies by completing the following types of activities. You must receive at least a 70% to receive credit for demonstrating competence.

You will complete the following kinds of activities as you work your way through the program. The total amount of points available for this mission is 3000.

Mission 12—Patho and Host Defense & Pathophysiology

Coach study hours are included as part of your attendance and participation for the mission. *You can earn up to xx points or approximately 5% of your total grade.*

Team based learning- is a multi-testing system in which each student will be responsible for completing both an individual and a group based test on a specific topic. At the completion of the test, the professor will provide immediate feedback on the content or case provided in class. It will contain a series of multiple choice questions. Both the iRAT and gRAT are worth 20 points each with the exception of the last week which will be worth 40 points each. You may receive up to 600 points or 20% of your grade.

Special projects-this will entail a literature review and corresponding paper and/or presentation. The instructor will provide a specific topic and students will be responsible for researching and developing the topic into a full length written paper and/or presentation. A total of two projects will be required, each worth 225 points, for a total of 15% of your grade.

Midterm will cover all the content learned in modules 1 to 3. You will take this exam in class. *You may receive 900 points for the midterm or 20% of your grade.*

End of Mission Exam will cover the content presented in modules 4 to 6. You will take this exam in class. *You can earn up to 900 points on the exam or 20% of your grade. **No retake of the End of Mission Exam will be allowed.***

Assessment	Total Points	Percent
CSH	150	5%
TBL (iRAT)	300	10%
TBL (gRAT)	300	10%
Special projects (2)	450	15%
Midterm	900	30%
Final Exam	900	30%
	3000	100%

Point conversion for grade

A	2700-3000
B	2400-2699
C	2100-2399
D	1800-2099
F	Below 1800

STAYING ON TRACK

Mission 12—Patho and Host Defense & Pathophysiology

The TEx app on your iPad will help you keep track of your schedule of activity due dates and will let you know if you begin to get off track. Your Instructional Facilitator and Instructors will also be monitoring your work and are there to help you; contact them immediately if you start to struggle. If you get behind, don't give up—work with them to make a plan to get back on track.

ABSENCE AND MAKEUP POLICY

Coached Study Hours and Class Activities are mandatory. If an excused absence is unavoidable, at the Instructor's sole discretion, students may complete an alternate assignment, which may include completing an individual version of the Team-based Learning activity or reading and summarizing a scientific article chosen by the Instructor.

CALENDAR OF EVENTS

The UTRGV academic calendar can be found at <http://my.utrgv.edu> at the bottom of the screen, prior to login. Important dates for Spring 2017 include:

January 19	Classes begin
March 14-18	Spring break, no classes
March 25-26	Easter holiday, no classes
May 5	Study day, no classes
May 6-12	Final exams

Note: Face-to-face and CSH days and times may vary.

Date	Day	Activity	Points	Contact
1/19/17	Week 1	Module 1: Unit 1-Cellular responses and adaptations		
1/16	Mon	Martin Luther King Jr. Day-no classes		
1/17	Tue			
1/18	Wed			
1/19	Thur	Learn about cell injury, cell death, and cell adaptations		
1/20	Fri			
* Dates/ Day varies		Mini Lecture CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
1/23/17	Week 2	Module 1: Unit 2-Inflammation and repair		
1/23	Mon	Learn about inflammation and repair		

Mission 12—Patho and Host Defense & Pathophysiology

1/24	Tue			
1/25	Wed			
1/26	Thur			
1/27	Fri			
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
1/30/17	Week 3	Module 2: Unit 1-Immune system		
1/30	Mon	Learn about the immune system		
1/31	Tue			
2/1	Wed			
2/2	Thur			
2/3	Fri			
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
2/6/17	Week 4	Module 2: Unit 2-Neoplasia		
2/6	Mon	Learn about neoplasia		
2/7	Tue			
2/8	Wed			
2/9	Thur			
2/10	Fri			

Mission 12—Patho and Host Defense & Pathophysiology

* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
2/13/17	Week 5	Module 2: Unit 3-Infectious diseases		
2/13	Mon	Learn about infectious diseases		
2/14	Tue			
2/15	Wed			
2/16	Thur			
2/17	Fri			
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
2/20	Week 6	Module 3: Unit 1-Environmental and nutritional diseases		
2/20	Mon	Learn about environmental and nutritional diseases		
2/21	Tue			
2/22	Wed			
2/23	Thur			
2/24	Fri	Special project #1 due	225	
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF

Mission 12—Patho and Host Defense & Pathophysiology

* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
2/27/17	Week 7	Midterm exam		
2/27	Mon			
2/28	Tue			
3/1	Wed			
3/2	Thur			
3/3	Fri			
* Dates/ Day varies		Review session during face-to-face and CSH		Professor
* Dates/ Day varies		Midterm exam	900	Professor
3/6/17	Week 8	Module 4: Unit 1-Cardiovascular and hemodynamic disorders		
3/6	Mon	Learn about cardiovascular and hemodynamic disorders		
3/7	Tue			
3/8	Wed			
3/9	Thur			
3/10	Fri			
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor

Mission 12—Patho and Host Defense & Pathophysiology

3/13/17	Week 9	Spring Break – no classes		
3/13	Mon	Spring Break – no classes		
3/14	Tue	Spring Break – no classes		
3/15	Wed	Spring Break – no classes		
3/16	Thur	Spring Break – no classes		
3/17	Fri	Spring Break – no classes		
* Dates/ Day varies				
* Dates/ Day varies				
3/20/17	Week 10	Module 4: Unit 2- Respiratory pathophysiology		
3/20	Mon	Learn about respiratory pathophysiology		
3/21	Tue			
3/22	Wed			
3/23	Thur			
3/24	Fri			
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
3/27/17	Week 11	Module 4: Unit 3-Urinary system pathophysiology		
3/27	Mon	Learn about urinary system pathophysiology		

Mission 12—Patho and Host Defense & Pathophysiology

3/28	Tue			
3/29	Wed			
3/30	Thur			
3/31	Fri			
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
4/3/17	Week 12	Module 5: Unit 1-Gastrointestinal pathophysiology		
4/3	Mon	Learn about gastrointestinal pathophysiology		
4/4	Tue			
4/5	Wed			
4/6	Thur			
4/7	Fri			
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
4/10/17	Week 13	Module 5: Unit 2-Endocrine pathophysiology		
4/10	Mon	Learn about endocrine pathophysiology		
4/11	Tue			
4/12	Wed			
4/13	Thur			
4/14	Fri	Easter holiday, no classes		
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF

Mission 12—Patho and Host Defense & Pathophysiology

* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
4/17/17	Week 14	Module 5: Unit 3-Reproductive system pathophysiology		
4/17	Mon	Learn reproductive system pathophysiology		
4/18	Tue			
4/19	Wed			
4/20	Thur			
4/21	Fri			
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
4/24/17	Week 15	Module 6: Unit 1-Musculoskeletal pathophysiology		
4/24	Mon	Learn about musculoskeletal pathophysiology		
4/25	Tue			
4/26	Wed			
4/27	Thur			
4/28	Fri			
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	20 20	Professor
5/1/17	Week 16	Module 6: Unit 2-Nervous system pathophysiology		
5/1	Mon	Learn about nervous system pathophysiology		

Mission 12—Patho and Host Defense & Pathophysiology

5/2	Tue			
5/3	Wed			
5/4	Thur	Special project #2 due	225	
5/5	Fri	Study Day – no classes		
* Dates/ Day varies		Mini lecture Q&A CSH	10	IF
* Dates/ Day varies		Face-to-face Lecture iRAT gRAT	40 40	Professor
5/8/17	Week 17	Final exam week		
5/9	Mon			
5/10	Tue			
5/11	Wed			
5/12	Thur			
5/13	Fri			
* Dates/ Day varies		Review session during face-to-face and CSH	10	Professor
* Dates/ Day varies		Final exam	900	Professor
	Total		3000	

UTRGV POLICY STATEMENTS

Students With Disabilities:

If you have a documented disability (physical, psychological, learning, or other disability which affects your academic performance) and would like to receive academic accommodations, please inform your instructor and contact Student Accessibility Services to schedule an appointment to initiate services. It is recommended that you schedule an appointment with Student Accessibility Services before classes start. However, accommodations can be provided at any time. Brownsville Campus: Student Accessibility

Mission 12—Patho and Host Defense & Pathophysiology

Services is located in Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at accessibility@utrgv.edu. Edinburg Campus: Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at accessibility@utrgv.edu.

Mandatory Mission Evaluation Period:

Students are required to complete an ONLINE evaluation of this mission, accessed through your UTRGV account (<http://my.utrgv.edu>); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades.

Attendance:

Students are expected to attend all scheduled classes and may be dropped from the mission for excessive absences. UTRGV's attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

Scholastic Integrity:

As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the mission and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism, and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

Sexual Harassment, Discrimination, And Violence:

In accordance with UT System regulations, your instructor is a "responsible employee" for reporting purposes under Title IX regulations and so must report any instance, occurring during a student's time in college, of sexual assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this mission through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect in an environment free from sexual misconduct and discrimination.

Mission 12—Patho and Host Defense & Pathophysiology

Course Drops:

According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six missions during their undergraduate career. Missions dropped at other Texas public higher education institutions will count toward the six-mission drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.