

## ***Course Syllabus – Spatial Dimensions of Health and Diseases***

### **Course Information**

Course number – GEOG 3357

Course title – Spatial Dimensions of Health and Diseases

Term – Fall 2017

Section – 001

Classroom – ECSN 2.126

Time – Tuesday/Thursday 1:00 – 2:15 pm

### **Professor Contact Information**

Name – Dr. Irina Vakulenko

Phone number – 972-883-6718

Email – [ivakulenko@utdallas.edu](mailto:ivakulenko@utdallas.edu) (best way to contact me)

Office location – GR 3.213

Office hours – Tuesday/Thursday 2:30-3:30 pm; by appointment

### **Course Pre-requisites, Co-requisites, and/or Other Restrictions**

There are no formal prerequisites for this course. General academic skills of analytical thinking, comparison, essay writing, working with reference sources as well as map reading will be helpful. Course topics require at least a general understanding of human biology, ecology, demographics, and statistics.

### **Course Description**

This course provides a broad introduction to medical geography, a sub-discipline which deals with human-environment interactions and the influence these interactions have on public health. It focuses on the topics of disease diffusion and human ecology, role of geographical information systems (GIS) for public health, health and healthcare disparities and various methods for analyzing health/disease data. Medical geography has a close disciplinary tie with epidemiology, biostatistics, and medical anthropology, but is differentiated by its focus on the spatial distributions of health related events. It allows determining health outcomes based on geographic variability due to economics, environmental influences, culture, race, policy, and history and the role of 'place'.

### **Student Learning Objectives/Outcomes**

Students will learn fundamentals of how health and disease happen and spread in environment and society. The students will utilize maps to examine the spatial patterns of disease and risk factors that may contribute to disease. The students will appreciate the effects of changes in global economy health and disease proliferation. They will acquire understanding and skill of how to spatially analyze and socially explain patterns in cause of death and etiology of health or disease. Good command of terminology of medical and health care professionals will help to open the door for future studies. Students will improve their skills in public speaking, argumentation of contentious issues and live debate.

***This class will fulfill your C3 oral communication course requirement, should you choose to apply for the Certificate (<http://oue.utdallas.edu/home/c3/>). See more info on e-learning course page.***

### **Required Textbooks and Materials**

*Health and Medical Geography*, 4th Edition, by Emch, Root, & Carrel. Copyright 2017 by The Guilford Press. ISBN 978-1-4625-2006-0. Additional reading will be required for the projects.

### Suggested Course Materials

Students are expected to take notes during PowerPoint presentations and complete assignments before due dates. Lecture material shall be complimented by reading the appropriate chapters in the book. It is important to complete the readings BEFORE class so that you may participate in the class discussions. This will help provide better understanding of class material.

### 3357 Assignments & Academic Calendar

#	Date	Topic	Chapter
1	8/22/17	Introduction To Medical Geography. History, Definitions, And Challenges.	Chapter 1
2	8/24/17	Disease Agents And Transmission Processes. The Triangle Of Human Ecology.	Chapter 2
3	8/29/17	Landscape Epidemiology.	Chapter 2
4	8/31/17	Vectored Disease.	Chapter 2
5	9/05/17	Political Ecology. The Poverty Syndrome, Race And Gender Health Risks.	Chapter 3
6	9/07/17	Causal Reasoning And Epidemiological Design. HIV/AIDS.	Chapter 3
7	9/12/17	Transitions And Development. Changes In Population Mortality, Natural Increase, Mobility, And Nutrition. Environmental Exposures.	Chapter 4
8	9/14/17	Impact Of Population Change On Health In Rural Areas. Globalization Of Movements.	Chapter 4
9	9/19/17	Test 1 – 20%	
10	9/21/17	Maps, GIS, And Spatial Analysis In Medical Geography.	Chapter 5
11	9/26/17	Disease Diffusion In Space. Terminology, Types Of Diffusion, Networks And Barriers.	Chapter 6
12	9/28/17	Modeling Disease Diffusion. Influenzas And Other Pandemics.	Chapter 6
13	10/03/17	Emerging Infectious Disease And Landscape Genetics.	Chapter 7
14	10/05/17	Food And Diet Changes In Light Of Modern Agricultural Systems And Green Revolution.	Chapter 8
15	10/10/17	The Nutrition Transition. Direct And Indirect Health Effects Of Dietary Changes.	Chapter 8
16	10/12/17	Discussion 1. Nutrition And Health.	20% for panelists. The rest get a chance for a bonus pt!
17	10/17/17	Neighborhood And Health. Analyzing The Effects Of Neighborhoods.	Chapter 9
18	10/19/17	Urban Health.	Chapter 10
19	10/24/17	Test 2 – 20%	
20	10/26/17	Environment And Health. Toxic Hazards. Air, Water, And Lead Pollution: Outdoor And Indoor. Risk Assessment And Prevention.	Chapter 11
21	10/31/17	Globalization And Perception Of Health Hazards. Environmental Justice. Healthy Environments.	Chapter 11
22	11/02/17	Discussion 2. Living with Degenerative Disease.	20% for panelists.

			The rest get a chance for a bonus pt!
23	11/07/17	Climate And Health. Direct Bio-Meteorological Influences.	Chapter 12
24	11/9/17	Seasonality Of Death And Birth. Climate Change And Health.	Chapter 12
25	11/14/17	Health Services And Access To Care. The Provision Of Medical Care.	Chapter 13
26	11/16/17	Discussion 3. Healthcare Systems Worldwide.	20% for panelists. The rest get a chance for a bonus pt!
27	11/28/17	Cultural Alternatives And Medical Pluralism. Health Promotion. Transforming Of Health Service Landscape.	Chapter 13
28	11/30/17	Test 3 – 20%.	
29	12/05/17	Review. Bring Your Notes And Participation Tags To Claim Up To 3 Bonus Points!!!	
30	TBA	Final Exam Is On TBA	20%

### Grading Policy

You are required to complete all the assignments. Results of Test 1 will equate with your Midterm Grade to be posted on **October 14, 2017**. Each of 3 tests is 20% of total grade. There are **three discussions** that are going to be held in the panel presentation format. Every student is to participate once as a presenter on a topic in one panel. A 7-8 page paper, complete with proper reference (MLA) is to be turned in on the day of the presentation. The entire project is 20% of the final grade. Textbook may provide the initial idea about the problem to discuss but independent review of scholarly literature and conclusions will be assessed. Students may work in small groups and present together, but the papers are based on individual research each student contributed to topic. The students in the audience are encouraged to ask questions and provide comments during two other discussion sessions. The total of 2 participation points (my initials on your participation tag) for contribution to the discussion equal **1 bonus point** to the final grade.

The Final Exam on **TBA** will make other 15% of your grade. All graded material will be assigned a numerical value on a scale of 100. Letter Grades are given as follows: 97% and over A+; 93% to 96% A; 90% to 92% A-; 87% to 89% B+; 83% to 86% B; 80% to 82% B-; 77% to 79% C+; 73% to 76% C; 70% to 72% C-; 67% to 69% D+; 63% to 66% D; 60% to 62% D; Less than 60% F.

### Course & Instructor Policies

Attendance is crucial for the successful learning and will be taken each class period. Many of my lectures and our discussions will include materials not found in the text. As a result a good set of class notes will be extremely helpful if you plan excelling in this course. To claim **another bonus point** for perfect attendance you need to have a set of notes covering EVERY topic discussed. If you missed a class (maximum 2 class absences may qualify you for a bonus point toward your final grade) the notes should be made as you read the assigned chapter in the book.

No makeup tests. (Individual consideration may be given in case of overwhelming circumstances). Although extra help may be provided to students, the professor will not hold alternate lectures or release lecture notes to students. Respectful discussions of the topics being studied are encouraged.

If you wish to look at the ancillary syllabus material, a link to that material is as follows  
<http://go.utdallas.edu/syllabus-policies>.

***These descriptions and timelines are subject to change at the discretion of the Professor.***