

HLTH 4380
Special Topics in Healthcare
Climate Change and Healthcare

Faculty Azadeh Stark, PhD, M.Ed.

Class: Friday
 9:00-11:45
 GR Building
 Rm 4.301

Office location: Hoblitzelle Hall office number: 2.104
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Course Description:

Throughout the history, humans have responded to environmental forces, natural disaster and ecological changes by developing and/or modifying their cultural norms and values, and restructuring of public health resources and delivery of healthcare.

Our modern society is not immune to natural disasters and environmental forces despite the extensive advancement of science and technology. These changes are exhausting our natural resources, re-shaping disease patterns and are exerting stress on our current public health infra-structures and healthcare resources. In this course, we explore the impact of climate change on natural resources and on complex risks to our health. Specifically, this course will be divided into three sections. The first section will be focused on the impact climate change on our food supplies and nutritional status and we will explore to understand and learn the etiology, clinical signs and symptoms of diseases, i.e. kwashiorkor, marasmus, that are the consequences of inadequate and/or poor quality food and nutrition. Additionally, we will evaluate the long-term impacts of inadequate food supply and marginal nutritional status on a given society. This section will begin on September 2/2016 and ends on September 30/2016.

During the second section of this course, we will focus on the impact of climate change and infectious diseases affecting humans. We will learn the risk factors, variables that can increase the likelihood for emerging infectious diseases such as malaria, typhoid fever, dengue fever. We will study the etiology, signs and symptoms and treatment modalities at the individual and public levels. This section will begin on October 7/2016 and will end on October 28/2016.

The last and final section will begin on November 4th,2016 and will end on December 2/2016. During this segment of our course, we will focus on the economic, social and public health policies of our present time. We will review of current healthcare infrastructure and our capabilities to effectively respond to a sudden disaster, i.e. a powerful storm or a deliberate man-made act of sabotage on our public health infrastructure. We will explore about options about how to improve our physical resources (food supply, water supply, power supply,

healthcare infrastructure, etc.). Additionally, we will explore the choices and possibilities for adaptation to a sudden disaster at an individual and societal levels.

Course Objectives:

1. To develop an understanding of the complex and interconnectedness of variables influencing our health.
2. To develop the skills of conducting research
3. To develop the skills and art of communication and public presentation
4. To identify the value and benefit of teamwork and group approach in tackling problems and finding the third alternative.
5. To have a productive, education and fun course and semester
6. To recognize that limitations are merely self-imposed and the sky is the only limitation

Course Philosophy and Requirements:

This structure of this course is seminar format; therefore, no exam will be administered.

This course has been designed to prepare the students for their future professional responsibilities which will include, but not limited to, conducting research, presentations at scientific meetings and preparation of scientific manuscripts. Professional productivity and responsibilities are highly collaborative and cooperative. Therefore, team-work and cooperation will be emphasized in this course.

Because of the format of this course, students are required to attend all the regularly scheduled classes. Active participation, discussion and exchange of thoughts are required and accounts for **20%** of the overall grade for this course. Students are highly encouraged to read various sources of information and share with the class new findings about the impact of climate/environment on our health and well-being, delivery of care and/or healthcare infrastructure.

Students/Seminar attendees will be divided into groups of 4 to 5 members. Each session we will start with discussion about one specific aspect of climate and its impact on our health. This discussion will take about 40 minutes; following the introductory talk and discussion of the new concepts, groups are required to present findings of their research to the rest of the seminar attendees. Presentations should not last more than 40-minutes. Topics of presentations/discussion will be provided a week in advance of the scheduled presentation. Research findings should be drafted into a documentation; at the end of the semester when students/seminar attendees will be required to turn-in the portfolio of their presentation. Research, presentation and development of manuscripts covers **60%** of the overall grade for this course.

Future opportunities for professional growth and development partly depends on networking and contribution to different professional societies and foundations. Therefore, arrangements have been made with the American Environmental Health Foundation for the students to attend the weekly meetings at the Foundation. Weekly attendance is required and accounts for **20%** of the overall grade for this course. Students are required to document their attendance and keep a log/diary about the weekly meetings, i.e. topics discussed, opportunity of meeting professional from various healthcare institutions, and overall learning opportunity for the week. Students are required to turn-in their log-books at the end of the semester. **ABSOLUTLEY NO PERFUME, AFTER SHAVE, FRAGRANCED BODY LOTIONS, COLOGNES WHEN ATTENDING THIS WEEKLY MEETINGS/CONFERENCES.**

Recommended Textbook:

Global Climate Change
And Human Health
From Science to Practice
George Luber and Jay Lemery (eds.)
Jossey-Bass Publishing Company
One Montgomery Street
Suite 1000
San Francisco, CA 94104-4594
www.josseybass.com
ISBN 978-1-118-50557

Course Policies:

- + Cell phones/electronics must be turned off during class time.
- + UTD email: All university and course communication is conducted via the student's UTD email account. It is the student's responsibility to check UTD email and respond accordingly.
- + Arriving late is disruptive to class activities and may affect your attendance and participation grade. If you have a legitimate reason for being late, please inform the faculty member ahead of time.
- + Course syllabus, handouts and copies of lecture slides will be posted on e-blackboard. Students are required to check the e-blackboard on a regular basis.

Weekly Research Assignment Format:

- I. Historical background about the disease
 - A. When the disease first was described
 - B. Who described the disease
 - C. Where/what country (describe the environment or circumstance which led to the documentation/discovery of the disease)
- II. Describe the disease
 - A. Who is at risk for the disease
 - B. What is/are the pathogen(s)
 - C. What is the mode of transmission?
 - D. What is/are the symptom (s)?
- III. Clinical treatment of the disease
 - A. What type of treatment(s) are available?
 - B. Cost of treatment (obtaining data/literature on this topic may be difficult, but try to see what you can find)
- IV. Public health intervention
 - A. Prevention
 - B. Secondary response (Describe what must be done to protect the health of the community and public) in case of an emergency (either natural or man-made)

Weekly Seminar Participation at the American Environmental Health Foundation

American Health Foundation holds monthly seminars/meeting on Tuesday afternoons/early evening. These meetings start at 5:30 pm and last for one hour. Please try to arrive on time; dress in professional attire; Please no perfume, after shave, fragranced body lotion or cologne. The first meeting will be on September 6th at 5:30 p.m. You will be requested to sign in at the time of arrival.

American Health Foundation is located at:
8345 Walnut Hill Lane
Suite 225
Dallas, TX 75231

Grading and Grading Policy:

Class Participation	20%
Weekly Research Presentations and Final Report	60%
Survey and Presentation	20%

A	90-100
B	80-89
C	70-79
D	60-69

Course schedule and research assignments:

Session	Date	Description
1	August 26	<ul style="list-style-type: none">- Introduction: Overview of syllabus and objectives- General overview of our health and connectivity to climate and environmental risk factors.- Assembly of Working Groups
2	September 2	Food and Water Supply, Human Health and Climate Research assignment to be presented on 9/9 Topic 1: Disease Kwashiorkor/PCM Topic 2: Disease Marasmus/PCM PCM= Protein Calorie Malnutrition

3	September 9	Food and Water Supply, Human Health and Climate Research assignment to be presented on 9/16 Topic 1: Calcium, phosphorous and Magnesium deficiency Topic 2: Anemia (pernicious anemia, macrocytic anemia, microcytic anemia, aplastic anemia)
4	September 16	Food and Water Supply, Human Health and Climate Research assignment to be presented on 9/23 Topic 1: Folic acid and B12 deficiency Topic 2: Iodine deficiency
5	September 23	Food and Water Supply, Human Health and Climate Research assignment to be presented on 9/30 Topic 1: Vitamin A deficiency Topic 2: Vitamin C deficiency
6	September 30	Food and Water Supply, Human Health and Climate Research assignment to be presented on 10/7 Topic 1: Cholera Topic 2: Schistosomiasis
7	October 7	Infectious Diseases and Climate Research assignment to be presented on 10/14 Topic1: Malaria Topic2: Dengue Fever
8	October 14	Infectious Diseases and Climate Research assignment to be presented on 10/21 Topic 1: Lyme Disease Topic 2: Pulmonary Hantavirus
9	October 21	Infectious Diseases and Climate Research assignment to be presented on 10/28 Topic1: Chagas Disease Topic2: Microcephaly
10	November 4	Healthcare and health policy and climate: Are we ready for changes? Research assignment to be presented on 11/11 Topic 1: River Blindness Topic 2: Arboviral Encephalitis
11	November 11	Healthcare and health policy and climate: Are we ready for changes? Research assignment to be presented on 11/18 Topic 1: Small Pox

Topic 2: Tuberculosis

12	November 18	Healthcare and Health Policy and Climate: Are we ready for changes? Assignment: Prepare your final research portfolio
13	November 25	Thanks Giving Holiday
14	December 2	Overview and summary