



## **Iowa Wesleyan University**

COURSE NUMBER TBD: One Health: Biology, Medicine, and  
Public Health in the Tropics  
Summer 2020  
June 3- June 17

**Credit Hours:** 3 credit hours

### **Instructor Contact Information**

Instructor: Erica Ward, DVM  
E-mail: Erica@loopabroad.com

E-mail: TBA

Instructor: Amanda Guthrie, DVM,  
DACZM

### **Required Text:**

All required materials will be made available in electronic format on site.

### **Iowa Wesleyan University Mission Statement**

Iowa Wesleyan University is a transformational learning community whose passion is to educate, empower, and inspire students to lead meaningful lives and careers.

Iowa Wesleyan University is a historic, faith-inspired, four-year university. The university is affiliated with the United Methodist Church with which it shares a commitment to spiritual values, social justice and human welfare.

### **IW Life Skills**

- **Communication:** Students will show proficiency in acquiring, processing, and transferring information in a variety of ways, including written communication, oral communication, and information literacy.
- **Critical Reasoning:** Students will strategically apply critical thinking and problem-solving skills.
- **Civic Engagement:** Students will develop the knowledge, skills, values, and motivation to actively engage in communities to promote social justice and human welfare.

### **Course Description**

This course explores the intersections of health, human medicine, veterinary medicine, environment and social development in the Tropics, with Belize as the focus. Emphasis is placed on the scientific, intercultural, and social aspects of global health, tropical medicine, public health, and ethno-biology. Students will also examine policy issues, conditions and determinants of public health and health policy in international health, and acquire an introduction to tropical

diseases and review the strategies used to respond to these diseases in resource-limited settings. Finally, students will learn to approach health in its wider social, economic and political context and acquire a basic understanding of the intimate, interdependent relationship between human and animal health, environmental health and development processes. Lectures, readings from primary literature, field-based learning and group discussion are also integral components of the program and provide the conceptual framework for discussion, analysis, and interpreting field observations and findings.

### **Course Goals and Learning Objectives**

By the end of this course, the student will be able to demonstrate a basic understanding of the concepts and principles of global health in general and Belize in particular. Upon successful completion of the course, the student will be able to:

- Describe the major issues and challenges in health and disease in Belize and globally.
- Be familiar with the concepts and terminology of international health and disease.
- Be able to approach health within a broad social, economic and political context.
- Attain a basic understanding of the interdependent relationship between health and development processes
- Identify mortality and morbidity in the Tropics
- Demonstrate knowledge of health concerns in Belize by ethnic and economic status
- Demonstrate basic suture skills and have a basic understanding of tissue handling, suture patterns, and suture

In addition, the following Learning Outcomes will be addressed or assessed as part of the course:

#### Communication Skills

- Oral Communication: Students will deliver a prepared, purposeful presentation designed to increase knowledge, to foster understanding, or to promote change in the listeners' attitudes, values, beliefs, or behaviors.
- Information Literacy: Students will show the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand.

#### Critical Reasoning

- Critical Thinking: Students will design, evaluate and implement a strategy to answer open-ended questions or achieve desired goals.
- Problem Solving: Students will comprehensively explore issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

#### Civic Engagement

- Civic Engagement: Students will demonstrate their ability to make a difference in the civic life of communities and develop the combination of knowledge, skills, values and motivation to make a difference in the quality of life of those communities.
- Global Learning: Students will become informed, open-minded, and responsible people who are attentive to diversity across the spectrum of differences, seek to understand how

their actions affect both local and global communities, and address the world's most pressing and enduring issues collaboratively and equitably.

## **Course Policies**

### **Attendance and Participation Policy**

In accordance with the IW Catalog and the IW Undergraduate Student Attendance Policy, students are expected to attend all class meetings for which they are registered. This is regarded as a matter of individual student responsibility. As mandated by federal law, all faculty members are expected to keep accurate records of class attendance. The only excused reasons for absences will be illness that impairs ability to attend and function within the classroom setting; unavoidable personal emergency, or participation in a University-sponsored event.

Students are expected to attend all class sessions on all days of class. It will be the responsibility of the student to contact the course instructor, preferably before the absence, to provide the appropriate documentation and verification for the reason for the absence, and to make arrangements with the course instructor for missed work. Students missing a class session without following this protocol will be subject to limited participation in hands-on practice at the instructor's discretion.

Regardless of the reason for absences, both absences from class will count toward the percentage of allowed absences. A "class" is one class session- some days, there are multiple class sessions. Students are responsible for all missed class material. Students may be subject to limited participation in hands-on practice at the instructor's discretion if they have missed the underlying material needed to safely perform the task at hand.

A warning to the student and student's home university point person may result if the student is absent 12.5% of the total number of class meetings. If a student is absent 25% of the total number of class meetings, the course instructor must notify the Registrar's Office which will initiate the withdrawal of the student from the class with a grade of WF (Withdrawn-Fail).

### **Grading Scale:**

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93-100%	= A	73-76.99%	= C
90-92.99%	= A-	70-72.99%	= C-
87-89.99%	= B+	67-69.99%	= D+
83-86.99%	= B	63 -66.99%	= D
80-82.99%	= B-	60- 62.99%	= D-
77-79.99%	= C+	59 and below	= F

### **Assignments and Points**

Your course grade will be determined as follows:

Writing Assignment: 20%

Exam: 20%

Student Presentation: 10%

Program Participation: 50%

The exam and writing assignment will be due 10 days after completion of the program. The exam will be online and open book format. The student presentation will occur during the program and you will receive all assignment details and grading rubrics on the first day of the program.

Your supervising veterinarian/instructor will complete a detailed student participation evaluation for your program participation grade. For this evaluation, you will be scored on the following criteria throughout the program:

- *Level of engagement.* You are expected to proactively contribute to class by offering ideas, asking questions, and volunteering answers multiple times each session.

- *Quality of contributions.* A majority of your contributions must be relevant and reflect understanding of the topic, provide insight, draw connections regarding the material, build upon remarks of another student, and/or demonstrate critical thinking skills.

- *Listening Skills.* You are expected to actively and respectfully listen to your peers and instructor, maintaining full engagement throughout the class session or activity.

- *Preparation.* You should always be prepared for class or the scheduled activity with necessary class materials. You should complete all homework assignments on time and be ready to discuss when appropriate.

- *Behavior.* You should never display disruptive or inappropriate behavior during a class session or activity. You should be polite and cooperative with students and the instructor.

### **Time and Commitment**

Class sessions and volunteer activities will take up a large portion of your day. This course will cover a large volume of terms, techniques, and information. We expect that you will find the time you invest to be productive and helpful, both in this class and going forward.

### **Supplies**

We have the opportunity to have this course in a field setting that allows for hands-on observation, practice, and study. This setting provides a unique hands-on opportunity to see what you are learning in practice. Each student should be prepared for a variety of weather and field conditions. Loosefitting clothing with long sleeves and pants are essentially for dealing with insects. Bring both sneakers and rubber boots as well as rain gear, a headlamp with extra batteries, and a water bottle. In addition, please have a supply of bug repellent, sunscreen and anti-itch ointment cream. Please refer to equipment list provided with pre-course paperwork and ask if there are any questions/concerns.

### **Technology**

You are welcome to use a laptop to take notes in class if you prefer. It is certainly not required. Please ensure that your phone is off during class sessions.

### **Diversity and Disability Statement**

Iowa Wesleyan values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are usable, equitable, inclusive and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, please notify me

as soon as possible. Students with disabilities are eligible for accommodations to help remove learning barriers in the course.

### **Academic Honesty**

Iowa Wesleyan has developed a strict policy to deal with those students who commit acts of academic dishonesty such as plagiarism and/or cheating. Such acts will not be tolerated in any form by the faculty and staff, and will carry stiff penalties. For more information regarding this policy, please consult the most current version of the IW Catalog.

## Course Schedule (subject to change):

DAY	TOPIC	READINGS
1	Introduction to the Course What is the “tropics”? What is Global? What is Health? An overview of geography, history, culture and economics and the relationship with health	1. PAHO, Health Systems Profile, Belize (2009) 2. C. Etienne, “Social Determinants of Health, a commentary”
2	Health care in developing countries General Overview of health in Belize Maternal/child health The economics of health care in a developing country Activity: Tour of local hospital LAB: Clinical Skills I	1. Anne Mills, “Health Care Systems in Low & Middle income countries” (2014) 2. Bhutta & Black, “Global Maternal, Newborn & Child Health-So Near & Yet so Far” (2014)
3	Social Determinants of Health The Epidemiology of Health in Belize Overview of health in Belize’s indigenous communities Traditional/cultural attitudes and approaches to health and disease (how do custom and culture affect disease and health?) Activity: Visit to medical garden with traditional healing plants and talk with a local healer	1. J.K.Cheng, “Confronting the Social Determinants of Health – Obesity, Neglect & Inequity”, (2014) 2. Arvigo & Balik, “Traditional Healing in Central America”, (1998)
4	Vectorborne and Zoonotic Disease (Malaria, Chagas, Dengue, Chikungunya, Ebola etc.) Discussion of some of the major traditional “tropical” diseases Emerging Infectious Diseases Surveillance of infectious diseases in Belize. Lab: Slides of tropical diseases Activity: Visit to Vector Control Unit of San Ignacio Hospital	1. Schwartz et al, “A review of malaria vaccine clinical projects based on the WHO rainbow table” (2011) 2. Briand et al, “The International Ebola Emergency”, (2014) 3. Charrel et al, “Chikungunya Outbreaks – Globalization of Vectorborne diseases”, (2007)
5	Waterborne and Foodborne Illness Burden of FBD in Belize Including food safety, mosquito control, water sampling, clean water projects, etc.	1. <a href="http://www.azdhs.gov/phs/oids/epi/disease/waterborne/list.htm">www.azdhs.gov/phs/oids/epi/disease/waterborne/list.htm</a> , “Waterborne Diseases” 2. Burden of Illness Belize Study results
	Guest speaker: Belize Agricultural Health Authority (BAHA) Activity: visit to BAHA lab End day with a debrief/review of week 1	3. Barry et al, “The Politics of Clean Water and Sanitation”, (2008) 4. SDH & UHC – (extra reading)
6	Communicable Diseases (HIV, TB, cholera, influenza, Ebola, etc.) Presentation of select communicable diseases particularly relevant to Belize Discussion of global health interventions by examining case studies: Are they successful? Why or why not? Speaker on HIV/AIDS Activity: Visit to community health centre LAB: Clinical Skills II	1. “Revolutionize HIV Prevention” 2. Briand et al, “The International Ebola Emergency” (2014)
7	Control of Disease Topics covered include: outbreak investigation, disease prevention, vaccines and their implementation, health and sex education in schools	Case study exercise
8	Public Health Policy What is public health? What is a “one-health” approach? <i>To Belize City for this day</i> Examine issues such as nutrition, mental health, etc. by meeting with National organizations which handle policy for some of these areas (National AIDS Foundation, National Drug Council, etc.) International Health – Visit to international health care organizations (PAHO and UNICEF) to learn about their work in health	1. Ezzati & Riboli, “Behavioral & Dietary Risk Factors for Noncommunicable Diseases” (2014) 2. Atlas et al, “One Health – Attaining Optimal Health for People, Animal & the Environment”, (2010)
9	Health and disease in the “south”: Why does it matter globally? Is there still such a thing as “tropical medicine”? Global Burden of Disease- Leading causes of death in the world (Heart disease, stroke, respiratory infections, diarrhea, HIV/AIDS, Diabetes, Road traffic incidents) Climate Change and implications for health: Speaker from Caribbean Community Climate Change Centre	1. J. McMichael, “Globalization, Climate Change and Human Health”, (2014) 2. Emily Shukman, “Global Climate Change and Infectious Diseases” (2010)
10	Presentations Final Exam Debrief/review of overall course. Course evaluation	