Name of Course: One Health in Practice
Course Number: VMB 415/BHS 415
Catalog Description of Course: This course discusses the intersections between human, animal and environmental health. It encourages students from diverse fields to develop interdisciplinary collaboration and communication skills to solve current one health problems.
Prerequisites, Co-requisites and Enforced Prerequisites: 3rd year standing or higher in any degree program at OSU. Postbaccalaureate students also welcome.
Instructor: Dr. Brianna Beechler
Number of term credits: 3
Weeks duration: 10
Total Hours Per term: 90 hours
Lecture and Discussion Hours: 30
Homework and required activities outside class: 60

Course Objectives:

The multidisciplinary nature of the "One Health" approach requires that One Health professionals are proficient in knowledge, skills, behaviors, and attitudes that go beyond the discipline-specific knowledge gained through traditional training programs. Therefore, we will use this class to foster communication and collaboration bridging gaps between traditional boundaries between fields. The class will focus on developing the core competencies as defined during the Rome Synthesis meeting (Frankson et al 2016). The two main two competencies developed in this class will focus on communication and collaboration between individuals from diverse fields and backgrounds (Frankson et al 2016; DOI: 10.3389/fpubh.2016.00192). Learning these skills will help the students to develop strategies that will allow them to work together to find solutions to the one health related problems. This course will be taught as a hybrid course which will allow information gathering, activities and discussions to occur both online and during in-person meetings - facilitating the learning process in multiple modalities. The course will consist of 4 modules. The first is a 4-week introduction module, while the second and third modules are 2-weeks where students will address one health related problems in small groups with guided activities to facilitate collaboration and communication skill development. The final 2-week module will allow students to address a one health related topic of their own choosing.

Measurable Student Learning Outcomes

1) Students will evaluate how diverse stakeholders can contribute to solutions, including identifying what skill sets are required to create one-health solutions.
2) Students will develop techniques to work effectively in diverse group assemblages, including communication skills.
3) Students will identify problems where a one-health focus will be useful.
4) Students will apply their knowledge to compose novel solutions to problems where a one-health approach is useful.

Learning Resources— There are no required textbooks or materials, links to material will be provided throughout the course on Canvas. However, several general resources exist for interested students including the online resources created by the one health initiative

(http://www.onehealthinitiative.com/) and the AVMA (https://www.avma.org/KB/Resources/Reference/Pages/One-Health.aspx). The textbook One Health: Integrated Approaches is also an excellent print resource for students who prefer textbooks (ISBN 978-1780643410).

Statement Regarding Students with Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at http://ds.oregonstate.edu. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

-Link to Statement of Expectations for Student Conduct, i.e., cheating policies

http://studentlife.oregonstate.edu/sites/studentlife.oregonstate.edu/files/final_code_of_student_conduct_updated_1_25_18.pdf

Evaluation of Student Performance:

Grading: A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: <60%

Grade breakdown per module:

Week 1: 10%
- Assignment 1 - 8%; Discussion 1 - 2%

Week 2: 10%
- Assignment 2 - 8%; Discussion 2 - 2%

Week 3: Assignment 3 - 8%, Discussion 3 - 2%

Week 5&6: 20%
- Assignment 4 - 10%
- Assignment 5 - 10%

Week 7&8: 20%
- Assignment 6 - 10%
- Assignment 7 - 10%

Week 9&10: 30%
- TED Talk: 15%
- News Article: 15%

Sample Course Schedule & Content:

Week	Topics	Readings	Assignments (always submitted on Canvas, under assignment tab)	Discussions	Lectures
1	Introduction to One Health	Concept of Health in One Health 10.3402/iee.v5.25300	Assignment 1: Find a peer-reviewed article or popular science article on one health and submit to me with a 1/2 page summary of why you found it useful.	In Class: Definition of One Health Activity Online: Discuss TED Talk, elaborating on what other fields of study have to contribute to One Health besides veterinary and human medicine.	In Class: Introduction, 2x15 minute guest lectures on one health Online: One health podcast, One Health TED Talk
2	One Health in Practice: Infectious Disease	Ebola One Health Article: https://doi.org/10.1371/journal.ppat.1005731 https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-016-0224-2	Assignment 2: How can one health be applied in your field - find an example where the one health focus will be useful and briefly explain the problem, how the one health approach can be useful and what other experts can contribute.	In Class: How can your field contribute to controlling and understanding outreaks like Ebola Online: Can you think of another infectious disease example where the one health approach is useful - discuss?	In Class: intro lecture on Ebola & public health, 20 minute infectious disease case (RMSF) Online: Medical Mystery Video
3	One Health In Practice: Environmental Health	Children, waterfowl and Lead in NW Nigeria 10.7556/jaoa.2017.075 and	Assignment 3: Find an example of an environmental health problem where the one health approach is useful and present a 2-minute	In Class: Lead Poisoning Case from AAVMC	In Class: 20 minute lecture on "animals as sentinels", 10 minute presentation on lead poisoning

		https://www.cdc.gov/onehealth/in-action/lead-poisoning.html http://www.sciencedirect.com/science/article/pii/S0378113517302134 https://www.smithsonianmag.com/smart-news/story-real-canary-coal-mine-180961570/	summary of it using powerpoint and voice recording.	Online: Is the video on pika's an example of one health in action? Why or why not?	Online: 2 x 10 minute guest lectures, watch video on pikas and climate change https://www.youtube.com/watch?v=Qhr69byxbHk
4	Communication Workshop Presented by the School of Public Health - Dr. Carozza	TBD	TBD	TBD	TBD
5	One Health in Practice Case 1 - Antimicrobial Resistance	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4975175/	Assignment 4: Students summarize "expert" homework and prepare presentation to group	In Class: Break into small groups and, identify experts needed to assess problem and form solutions, Decide what answers are needed from experts and assign "expert homework"	In Class: 20 minute lecture on overarching theme, 15 minute guest lecture on specific problem Online: In group discussion board forums discuss problem and solutions

6	One Health in Practice Case 1 - Antimicrobial Resistance	None	Assignment 5 (group): Create one video or handout that summarizes your solution and upload to Canvas	Online: Discuss others solutions on discussion board	In Class: Presentations by actual experts (20 minutes); Small group discussion of solution and preparation of assignment 5
7	One Health in Practice Case 2 - Vectorborne Disease	http://www.sciencedirect.com/science/article/pii/S1471492213001086 http://nymag.com/scienceofus/2016/06/asian-tiger-mosquito-zika-virus.html	Assignment 6: Students summarize "expert" homework and prepare presentation to group	In Class: Break into small groups and, identify experts needed to assess problem and form solutions, Decide what answers are needed from experts and assign "expert homework"	In Class: 20 minute lecture on overarching theme, 15 minute guest lecture on specific problem Online: In group discussion board forums discuss problem and solutions
8	One Health in Practice Case 2 - Vectorborne disease	None	Assignment 7 (group): Create one video or handout that summarizes your solution and upload to Canvas	Online: Discuss others solutions on discussion board	In Class: Presentations by actual experts (20 minutes); Small group discussion of solution and preparation of assignment 7
9	Student Project	None	WORK ON PROBLEM - NO CLASS OR ASSIGNMENT		
10	Student Project	None	Create and upload a "news" article you wrote about your problem and your solution	Online: Read your classmates articles and discuss	In Class: Present solution/problem as if it was a TED talk (one per group)