Meeting Time and Location:
Location TBA, Medford, MA
Mondays, 1:30 PM – 4:00 PM

Course Instructor:
Dr. Deborah Linder
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Teaching Assistant:
Eli Halbreich
Email: Eli.Halbreich@tufts.edu

Course Objectives

- Describe the role and benefits of a One Health approach in addressing high priority health issues.
- Develop the habit of evidence-based discourse whether an issue/idea is being supported or refuted.
- Identify 3-5 evidence-based responses to questions posed. Reference class discussion and readings in responses.
- Understand the context/background information presented for each question/issue.

Course Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Lead/Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: 9/14/20</td>
<td>Introduction to One Health, Course, Assignments</td>
<td>Linder</td>
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<tr>
<td>2: 9/21/20</td>
<td>ZOO: Zoonotic Disease Introduction</td>
<td>Castellot/Linder</td>
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<tr>
<td>3: 9/28/20</td>
<td>ZOO: Zoonotic Disease and Global Health</td>
<td>Castellot</td>
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<tr>
<td>4: 10/05/20</td>
<td>ENV: Environment and Antimicrobial Resistance</td>
<td>Nadimpalli</td>
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<tr>
<td>5: 10/12/20</td>
<td>ENV: Environment and Nutrition</td>
<td>Bezares</td>
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<tr>
<td>6: 10/19/20</td>
<td>HAI: Human-Animal Interaction Introduction</td>
<td>Linder/Mueller</td>
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<tr>
<td>7: 10/26/20</td>
<td>HAI: Human-Animal Interaction Applied</td>
<td>Linder/Gibbs/Boo</td>
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<tr>
<td>8: 11/02/20</td>
<td>SD: Shared Diseases and Obesity &amp; Cancer</td>
<td>Linder/Gardner</td>
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<tr>
<td>9: 11/09/20</td>
<td>SD: Shared Diseases and Dental</td>
<td>Dhadwal/Rosenblad/Dragan</td>
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<td>10: 11/16/20</td>
<td>AOH: One Health in Pet Food</td>
<td>Linder/Cash</td>
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<td>11: 11/23/20</td>
<td>AOH: One Health Communications</td>
<td>Linder/Rutberg/Gualtieri</td>
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<tr>
<td>12: 11/30/20</td>
<td>Celebrating One Health: Presentation of Class Projects</td>
<td>Linder/Students</td>
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<tr>
<td>13: 12/07/20</td>
<td>Celebrating One Health: Presentation of Class Projects</td>
<td>Linder/Students</td>
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# Presentation Details*

*Readings and activities are subject to change and a final syllabus will be available August*

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Introduction to One Health, Course, Assignments</th>
<th>Linder</th>
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</thead>
<tbody>
<tr>
<td><strong>Topic:</strong></td>
<td>Introduction to One Health</td>
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<tr>
<td><strong>Activities:</strong></td>
<td>Professional applications of One Health, group discussion, brainstorming for capstone presentation</td>
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<tr>
<td><strong>Suggested Reading:</strong></td>
<td>1. USAID One Health Workforce Overview (PDF will be provided to students)</td>
<td></td>
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<tr>
<td><strong>Assignments:</strong></td>
<td>Group discussion, interactive brainstorming session with peer review</td>
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<thead>
<tr>
<th>Week 2</th>
<th>ZOO: Zoonotic Disease Introduction</th>
<th>Castellot/Linder</th>
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<tbody>
<tr>
<td><strong>Topic:</strong></td>
<td>Introduction to Zoonotic Diseases, with case examples for discussion (e.g. SARS, Ebola, Zika)</td>
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<tr>
<td><strong>Activities:</strong></td>
<td>Group Discussion</td>
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<tr>
<td><strong>Assignments:</strong></td>
<td>Group discussion write up</td>
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<tr>
<th>Week 3</th>
<th>ZOO: Zoonotic Disease and Global Health</th>
<th>Castellot</th>
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<tbody>
<tr>
<td><strong>Topic:</strong></td>
<td>One Health and the Global Health Security Agenda: Antimicrobial resistance, Zoonotic disease, Workforce development</td>
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<tr>
<td><strong>Activities:</strong></td>
<td>Introduction and discussion on the Global Health Security Agenda (GHSA)</td>
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</tbody>
</table>
| **Required Reading:** | Global Health Security Agenda:  
4. Explore the GHSA website to develop an overview of the GHSA. [https://www.ghsagenda.org/](https://www.ghsagenda.org/)  
GHSA Action Packages:  
| **Assignments:** | • Take a position: The GHSA strives to decrease the impact of zoonotic disease on global health. Is |        |
organization of this effort across multiple countries and partners a strength or a weakness? Or both?

- Prepare a one-page set of recommendations for enhancing the structure of the GHSA. Reference specific GHSA packages in your responses.

### Week 4

**ENV: Environment and Antimicrobial Resistance**

**Nadimpalli**

**Topic:** One Health and the Environment: Antimicrobial Resistance

**Activities:** Discussion to include: introduction to antibiotic resistance and connections between humans, animals, and the environment; overview of antibiotic use in livestock production; drivers of changing food production systems; environmental impacts of large-scale animal farming; concepts of environmental justice

**Required Reading:**


**Assignments:**

- Prior to class, find any online news article or opinion piece that discusses animal production (chicken, pigs, cattle) in one of the following developing countries where antibiotic use in food animals is expected to be highest in the next 30 years: China, Brazil, Mexico, India. Answer the following:
  - What is the main message?
  - What category of individuals (e.g. government ministers, economists, farmers, activists), reports (e.g. National Economic Forecast), or organizations (e.g. FAO, Ministry of Health) are quoted in the article?
  - Were any concerns raised about the human, animal, or environmental impacts of increased animal production?

- Persuasive commentary from a stakeholder position in each category: farmer, medical doctor, veterinarian (to do during class).

### Week 5

**ENV: Environment and Nutrition**

**Bezares**

**Topic:** World food supply and livestock production. Discussion to include: introduction to the global food system; general production trends and associated trade patterns; the role of livestock in the world; livestock’s contribution to climate change; climate impacts on crop quality.
## Activities: Group Discussion

<table>
<thead>
<tr>
<th>Required Reading</th>
<th>Suggested Reading</th>
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</thead>
</table>

## Assignments:
1-2-page reflection to be completed prior to class, responding to: should you change your diet based on the concerns introduced by the readings?

**Week 6**

**HAI: Human-Animal Interaction Introduction**

**Topic:** Introduction to HAI, definitions of assistance animals, discussion of how the media portrays HAI.

**Activities:** Group discussion and debate

**Required Reading:**


**Assignments:** Group write up and debate during class regarding pros and cons of emotional support animals.

**Week 7**

**HAI: Human-Animal Interaction Applied**

**Topic:** Animal-assisted interventions
<table>
<thead>
<tr>
<th><strong>Week 8</strong></th>
<th><strong>SD: Shared Diseases and Obesity &amp; Cancer</strong></th>
<th><strong>Linder/Gardner</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic:</strong></td>
<td>Introduction to naturally occurring animal diseases that also occur in people</td>
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</tr>
<tr>
<td><strong>Activities:</strong></td>
<td>Introduction and interactive discussion</td>
<td></td>
</tr>
<tr>
<td><strong>Assignments:</strong></td>
<td>Persuasive commentary from a stakeholder position in each category: animal, handler, participant, facility</td>
<td></td>
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**Activities:**
Demonstration of therapy animal visitation, group discussion on therapy animals and the various interventions that exist.

**Assignments:**

- In class debate on pros and cons of clinical trials in companion animals vs. traditional laboratory animal research.
- Outline for capstone presentation (due before class that day, Dr. Linder to provide info)

<table>
<thead>
<tr>
<th><strong>Week 9</strong></th>
<th><strong>SD: Shared Diseases and Periodontitis</strong></th>
<th><strong>Dhadwal/Rosenblad/Dragan</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Topic:</strong></td>
<td>Periodontal disease and shared health</td>
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<tr>
<td><strong>Activities:</strong></td>
<td>Dr. Rosenblad will speak on veterinary dentistry and Dr. Dragan will speak on dentistry in humans. Discussion will be focused on: Periodontal disease in humans and canines. Topics discussed will be: clinical signs, pathogenesis, link between periodontitis and different systemic diseases especially cardiovascular diseases and various prevention and treatment options. Various animal models for periodontal disease progression and their contribution in understanding the progression of the periodontal disease in humans.</td>
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</tr>
<tr>
<td>Topic</td>
<td>Week 10</td>
<td>AOH: One Health in Pet Food</td>
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<tr>
<td>This week will serve as an interactive session to explore how many aspects of One Health are needed to address pet food.</td>
<td>Activities:</td>
<td>Class discussion</td>
</tr>
<tr>
<td>24. Cash, et al. article (on Canvas in “Readings” folder)</td>
<td>Assignments:</td>
<td>Active participation in discussion will be only graded assignment.</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Topic</th>
<th>Week 11</th>
<th>AOH: One Health Communication</th>
<th>Linder/ Rutberg/ Gualtieri</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication and Public Policy of One Health concepts</td>
<td>Activities:</td>
<td>Guest Speakers (Lisa Gualtieri; Public Health and Community Medicine), Allen Rutberg (Center for Animals and Public Policy), time set aside for students to meet and discuss final preparations for presentations</td>
<td></td>
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</tbody>
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<thead>
<tr>
<th>Activities:</th>
<th>Week 12</th>
<th>Celebrating One Health: Presentation of Class Projects</th>
<th>Linder/ Students</th>
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<tbody>
<tr>
<td>No reading assignments, students will peer review one another’s presentations.</td>
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</tbody>
</table>
Week 13  | Celebrating One Health: Presentation of Class Projects  | Linder/Students
---|---|---
Activities: | No reading assignments, students will peer review one another’s presentations. |

**Grading Criteria**

The course format is designed to promote student preparation, interactive discussion and intellectual accountability for issues considered. Attendance is required. Students are expected to arrive to class on time and behave as if they were the speaker. Participation is required of all students in group assignments and class discussion. All viewpoints are welcomed and will be respected. Students should strive to develop communication habits that promote collegial discussion with their peers and others, independent of the content of the discussion.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage of Final Grade</th>
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<tbody>
<tr>
<td>Weekly in-class, group discussion write-ups</td>
<td>25%</td>
</tr>
<tr>
<td>Class attendance and individual preparation for and participation in class discussion</td>
<td>25%</td>
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<tr>
<td>Preliminary outline of presentation</td>
<td>15%</td>
</tr>
<tr>
<td>Capstone presentation</td>
<td>35%</td>
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</tbody>
</table>

**Bibliography of Sources that Relate to the Course (Required Readings)**

The amount of preparatory material for each class period is variable. Required readings for each class are intended to provide a context for the lecture or to supplement lecture content. Some material may be included in the readings that will not be specifically addressed in the lecture, although it may all be included in discussion. Students will get the most out of this course if readings are completed prior to the class for which they are assigned.

1. USAID One Health Workforce Overview (PDF will be provided to students)
4. Explore the GHSA website to develop an overview of the GHSA. [https://www.ghsagenda.org/](https://www.ghsagenda.org/)
24. Cash, et al. article (on Canvas in “Readings” folder)
Session Leaders and Guest Faculty

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