Designing a One Health Curriculum

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Topics for today

• Setting goals and approaches for one health curriculum development

• Defining resources for a one health curriculum – asset mapping for one health

  ~break~

• VUE concept mapping exercise

• Building a curriculum in one health

  ~lunch~

• Teaching one health
Tufts One Health Teaching Team

- Joann Lindenmayer – DVM, MPH Veterinary School
- Elena Naumova, PhD – Engineering School
- Michael Reed, PhD – School of Arts and Sciences
- Alison Robbins, DVM – Veterinary School
- Antje Danielson, PhD – TIE
- Center for Learning and Teaching (CELT)
- Academic Technology
- TUSK support team

- MCM & DVM Faculty and students in our programs
One Health Teaching Initiatives at Tufts

- DVM curriculum changes
- DVM – MPH dual degree program
- DVM signature opportunity in wildlife and conservation Medicine
- University Seminar on One Health
- Master’s in Conservation Medicine Program
University Seminars

ONE HEALTH:
Interdisciplinary Approaches to People, Animals, & the Environment

FACULTY:
Gretchen Kaufman, Joann Lindenmayer, J. Michael Reed, and Elena Naumova

TIME:
Tuesdays, 4:30-7:00pm

LOCATION:
Medford Campus

COURSE:
CIS 202 (HIGH DEMAND*)
Open to graduate students, professional degree candidates, and qualified seniors and juniors

APPLY NOW! SPRING 2011 COURSE

For an application and more information, go to http://provost.tufts.edu/useminar
Questions? Email: useminar@tufts.edu

*This is a HIGH DEMAND course – you must apply and be registered through the Office of the Provost

Search "University Seminar" on Facebook for more info on courses and application process.
Master of Science in Conservation Medicine Program

As the 21st century unfolds, humankind is confronting significant and complex challenges to health and the environment. How we face those challenges will determine our own fate and that of many species with which we share the planet. The complexity of the challenges defies the traditional disciplinary approach to problem solving and calls for more integrated multidisciplinary team efforts. Embracing a commitment to protect biodiversity, conservation medicine pursues a One Health approach to address urgent health issues facing our stressed planet, such as: emerging diseases, wildlife-livestock conflicts, environmental contamination and climate change. Conservation medicine professionals use their expertise and collaborative skills to work with other scientists, professionals, policy-makers, and local communities to develop and implement solutions for these important health-related challenges within an ecological context.
One Health

CONSERVATION MEDICINE
#1 Wildlife health
#2 Environmental health
#3 Human health

PUBLIC HEALTH
#1 Human health
#2 Animal health
#3 Environmental health

ECOSYSTEM HEALTH
#1 Environmental health
#2 Human health
#3 Animal health
One Health and Conservation Medicine

• Roots at Tufts Veterinary School - Tufts Center for Conservation Medicine

• Focuses on health relationships occurring at the interface of humans, animals, and the environment...

• To develop & apply solutions to problems that also sustain biodiversity and protect the ecosystems essential to animal & human health.
Practicing one health and teaching one health

Similar challenges

• Breaking down barriers and traditions
• Communicating across disciplines
• Sharing resources and working together (instead of competing)
• Designing new methodologies
• Measuring outcomes
Curriculum Goals and Approaches

What is your goal? What are you trying to do?

• Train more people?
• Train people differently?
• Create a new type of professional?
• Support new approaches in research?
• Create new policy makers?
• Create new leaders?
Curriculum Goals and Approaches

Approach may be determined by scope

- Changing an existing curriculum to include one health approaches
- Adding elective material to an existing course or program
- Creating a course or group of courses that is cross-listed and accessible to different programs
- Creating a new certificate or degree program that bridges disciplines
- Creating a new One Health department/program/ or school that bridges disciplines and incorporates teaching and research
Curriculum Goals and Approaches

The importance of interdisciplinarity to One Health
Designing a One Health Curriculum
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Defining Your Resources

Asset mapping for One Health?
Asset mapping for One Health

• What is Asset Mapping?
  Creating an inventory of resources available to a community

• Why is asset mapping important at a large institution or in an institutional collaborative?

• Why asset mapping for One Health?

• Two examples at Tufts:
  o MCM program development
  o RESPOND project
Asset mapping for the MCM program

- Faculty resources!
- Methodology
  - Personal and institutional networks and direct mail
  - Presentations to key faculty groups

- Identified faculty, their programs and disciplinary expertise from institutional website
  - Targeted agreed upon MCM curricular goals
  - Found 56 potential faculty from 7 schools and 16 programs/departments within Tufts University (all campuses)
  - Identified 24+ potential faculty through external networks

- Contacted via email letter with some targeted followup
Curriculum Asset Mapping for One Health Education – RESPOND

- Curricular assets
- Faculty expertise

Asset
  = a course, program or faculty expertise relevant to a particular One Health problem
  = EID with emphasis on zoonotic disease surveillance, outbreak investigation and response
Introduction to VUE & Concept Mapping
Building an asset map for Tufts MCM using VUE

• Collect data
  o Found 56 potential faculty
  o 7 schools
  o 16 programs/departments within Tufts University (all campuses)

• Visually organize resources
Location of Faculty Assets in various Tufts University Schools and departments/programs

- Veterinary
  - Veterinary Environmental and Pop Health
    - 12

- Medical
  - Public Health
    - 4

- Law & Diplomacy
  - various
    - 4

- Veterinary
  - Biomedical Sciences
    - 5

- Engineering
  - Biomedical Eng
    - 1

- Medical
  - Infectious Diseases
    - 1

- Engineering
  - Civil & Environmental
    - 7

- Dental
  - Prosthodontics
    - 1

- Medical
  - Microbiology
    - 1

- Nutrition
  - Agriculture Food & Environ
    - 5

- A&S
  - Biology
    - 6

- A&S
  - Urban & Env Planning
    - 9

- A&S
  - Economics
    - 3

- A&S
  - Chemistry
    - 3
Concept Mapping exercise

1. On a piece of paper (10 min.):
   a) List major administrative divisions within your institution or collaborative (10 min)
   b) Identify programs that could contribute to a one health curriculum, including their home division
   c) Identify faculty that you know within these programs that you could engage to participate in a one health curriculum, including their affiliation

2. Download and install VUE to laptops (10 min) – if computer not available, get large piece of paper

3. Create a very simple VUE map by (30 min)
   a) Making a node for every division in your list – color code according to your own idea
   b) Nest subdivisions and programs appropriately
   c) Use arrows to show One Health Linkages that exist currently
   d) Use different colored arrows to show potential One Health linkages
   e) At home – add One health assets to each node – such as courses, faculty expertise, physical facilities, etc.