CVM TOWN HALL

- Overview of curriculum redesign
- Alignment / Backward Design
- Course Development
- Time for discussion
CURRICULUM REDESIGN

Multiple components
Movement to more authentic and active learning.
WHAT THIS ENTAILS...

➤ Competencies
   ➤ Evaluation of knowledge in action
   ➤ Aligned with national standards
   ➤ Coordinated and transparent curriculum
   ➤ Includes additional professionalism competencies

➤ Flipped model
   ➤ Active classrooms
   ➤ Production of digital materials

➤ Systems-based courses
   ➤ Consecutive not concurrent
   ➤ Coordinated among disciplines

➤ Iterative system for improvement
EVIDENCE BASED PRACTICES

Average Improvement in failure rates (12%)

Percent Decrease in Failure Rate with Active Learning

Freeman et al. 2013
ALIGNMENT

First stage
Nyssa Levy, Martha Mulks, Jen Roberts, and Mike Scott sorting competencies.
Curriculum Working Group

Horizontal
(Discipline Early/mid/late)

Vertical
(Classes in each year)

Clinical
Abnormal
Normal

AAVMC

Domains
Competencies
Sub Competencies
Learning Objectives

Course Moderators

Objectives
Assessments
Teaching Materials
Untethered competencies

Communication
Professionalism
Ethics

Your Course
“Knowledge”
“Knowledge in action”

Connecting to the preparation you did for today…
Describe relevant landmarks for arthrocentesis of easily accessible and clinically relevant joints in the horse and dog.

• Is ”describe” what you want a vet to do here?
• What does this look like in practice?
• Bloom’s focuses on cognitive aspect but may miss the psychomotor skill, behavior, or attitude.
PAIR UP…

How can your program benefit from having course objectives aligned up through national competencies?
ALIGNMENT ACROSS YEARS

Mike Scott
Competency Working Group: Themes

Upon graduation, CVM graduates will have the

1) veterinary and scientific knowledge,
2) cognitive and technical skills,
3) communication skills,
4) learning skills,
5) social competence, and
6) professionalism and emotional maturity

to reach their potential through life-long engagement in activities that address societal needs and benefit global health.
Collected about 800 “Competencies”

<table>
<thead>
<tr>
<th>Disciplines</th>
<th>Initial Refinement with Action Verbs</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural Literacy</td>
<td>1. List the major commodities (meat, dairy, eggs) and specialty products (fiber, beef, pork)</td>
<td>1</td>
</tr>
<tr>
<td>Agricultural Literacy</td>
<td>2. Identify the importance of major commodities and specialty products of animal agriculture</td>
<td>1</td>
</tr>
<tr>
<td>Agricultural Literacy</td>
<td>3. Given a specific animal agriculture production system (dairy, beef, swine, etc.)</td>
<td>2</td>
</tr>
<tr>
<td>Agricultural Literacy</td>
<td>4. Identify animal welfare concerns for each major animal industry.</td>
<td>1</td>
</tr>
<tr>
<td>Agricultural Literacy</td>
<td>5. Identify the role of the veterinarian in helping farmers and society to address animal welfare</td>
<td>1</td>
</tr>
<tr>
<td>Agricultural Literacy</td>
<td>6. Given a welfare concern in a specific agriculture production system, describe how to address it</td>
<td>2</td>
</tr>
<tr>
<td><strong>Z</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zoonotic diseases</td>
<td>7. Identify the potential routes of transmission of zoonotic diseases among species</td>
<td>1</td>
</tr>
<tr>
<td>Zoonotic diseases</td>
<td>8. Identify common or important zoonotic diseases that are endemic to specific geographical areas</td>
<td>1</td>
</tr>
<tr>
<td>Zoonotic diseases</td>
<td>9. Describe how to access resources on zoonotic diseases in specific geographical areas</td>
<td>1</td>
</tr>
<tr>
<td>Zoonotic diseases</td>
<td>10. Identify resources and practices to maintain awareness of emerging zoonotic diseases</td>
<td>1</td>
</tr>
</tbody>
</table>
Sorted into Courses

- Preliminary – will be refined by course teams
- Considered normality (yr 1) vs abnormality (yr 2)
- Considered level and need for prerequisite material
- Non-systems “competencies” integrated throughout
Course Order Considerations

- Natural progression of competencies and learning outcomes
- Desired timing of clinical skills development (aligned with courses)
- Logistical issues related to seasonal clinical duties (e.g., foal season)
- Logistical issues scheduling an organ system at the same time in year 1 and year 2, as this would overload certain instructors
- Opportunities for spaced repetition
- Group judgment

Note: Other orders could work; all require progressive integration
Program Introduction
Hierarchy of Evidence
Scientific Method
Learning Skills
Nutrition (in health)
Microbiology if not in Cell Bio prereq.

Animal Behavior (abnormal)
Epidemiology/Public Health
Mechanisms of Disease
  - Microbiology/Infectious Diseases
  - Oncology
  - Pathology
Pharmacology/Toxicology
Year 1

- Whole body systems first for framework; related skills
  - Joint taps, eye and ear exams, cardiac auscultation, venipuncture, skin sutures and instrument handling
- Respiratory near CV, with spaced repetition (Cutaneous)
- Immunology and Hematology near CV; blood microscopy
- Endocrine (body-wide system) before Reproduction
- Urinary near Repro; revisit topics (blood gas, fluid balance)
- Digestive (GI, liver, pancreas); revisit topics
• Immuno/Hem early: relevant to most other systems
• Cutaneous builds on immunologic disease; common
• Reproduction preferred in fall, not during foal season
• Respiratory staggered from year 1; near CV after break
• Urinary has ties to CV and Respiratory, so placed next
• Digestive prior to paired Musculoskeletal & Nervous system
• Endocrinology after foundation of disorders with similar signs and lab results – revisit, compare, contrast
Strengths or weaknesses?

Year 1

Fall

One Health I

Vet. Sci. I
Animals in Society
Musculo. System I
Nervous System I
CV System I
Cutan. System I

Professionalism/Doctoring I

Practice Management/Finances I

Spring

One Health II

Resp. System I
Immuo/Hematol. I
Endo. System I
Repro. System I
Urinary System I
Digest. System I

Professionalism/Doctoring II

Practice Management/Finances II

Year 2

Fall

One Health III

Vet. Sci. II
Immuno/Hematol. II
Cutan. System II
Repro. System II
Resp. System II

Professionalism/Doctoring III

Practice Management/Finances III

Spring

One Health IV

CV System II
Urinary System II
Digest. System II
Musculo. System II
Nervous System II
Endo. System II

Professionalism/Doctoring IV

Practice Management/Finances IV
BACKWARD DESIGN
**Objectives**

What will your students learn?

- Revising or creating objectives for your course.
- Consulting with specialty experts.
- Connecting to national standards.

**Assessment**

How will you know what your students learn?

- Matching assessment types with specific competencies.
- Creating new assessments to better measure knowledge in action.

**Teaching Materials**

What will help your students learn?

- Gathering and creating appropriate flipped materials.
- Generating active exercises for classroom.
PAIR UP . . .

Given that you’re ultimately assessing students’ knowledge in action at the end of your course, how would that affect your day-to-day teaching?

Why is it important to keep the end in mind?
EXPERIENCE SO FAR...

Ioana Sonea
PANEL Q&A