

A young boy in a striped shirt and shorts is herding sheep on a dirt path at sunset. The scene is captured from behind the boy, showing him holding a stick and looking towards a group of sheep. The background features a wooden fence and trees under a warm, golden sky.

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# OIE Curricula Guidelines for VPPs

The OIE Sub-Regional Virtual Workshop on Veterinary Paraprofessional (VPP)  
Competencies and Trainings. 31 March – 1 April 2022



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# OIE Educational Guidelines for VPPs

- Competencies:

- Tracks

- Animal Health (AH)
- Veterinary Public Health (VPH)
- Laboratory Diagnosis (Lab)

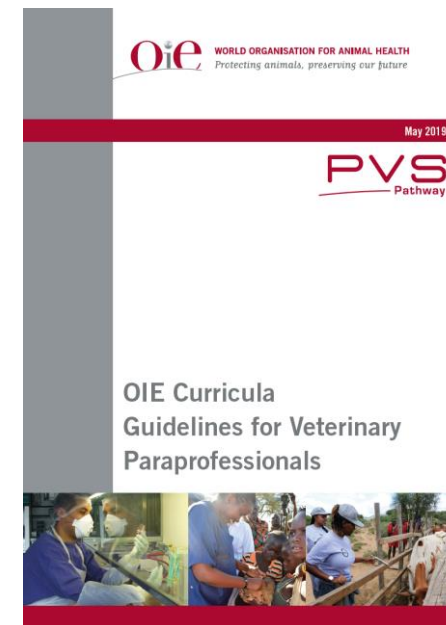
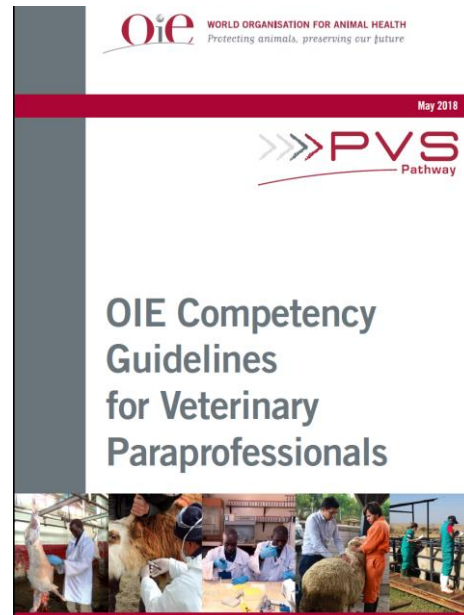
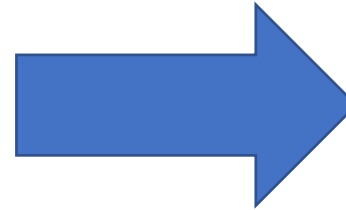
- Spheres of Activity (SoA)

- Competencies

- Curriculum:

- Courses

- Units
- Learning Outcomes



Classroom representations of the Competencies

# Linkage Between Workforce & Training

Identify the **Competencies** needed

Workforce

?

But how to deliver this, given the huge diversity and context of VPP roles?

Training

Certification

Design the **Curriculum** to deliver this

# Modular Approach to Curriculum Design

## Competency Guidelines

- Tracks
- Spheres of Activity (SoA)



## Curricular Guidelines

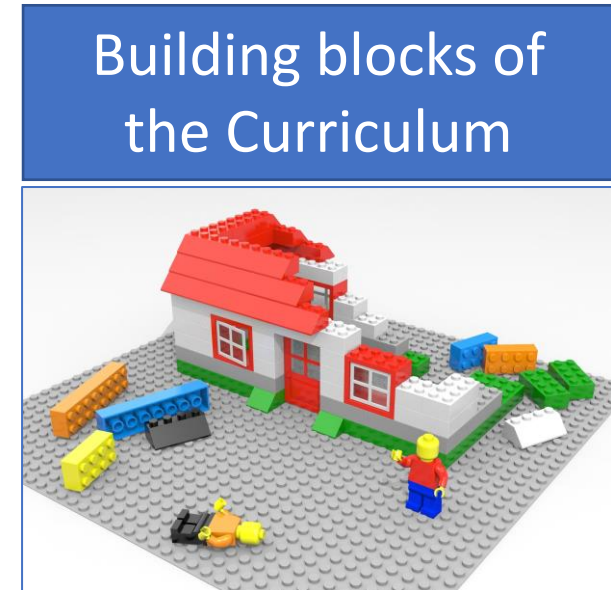
- Associated Competencies

Table 1: Spheres of Activity by VPP track

Sphere of Activity	Tracks of Veterinary Paraprofessionals		
	Lab	Animal Health	Public Health
1. Animal and Veterinary Science		•	•
2. Laboratory Science	•		
3. Biosafety, Biosecurity and Occupational Health & Safety	•	•	•
4. Communication	•	•	•
5. Veterinary Legislation, Policies, Ethics and Professionalism	•	•	•
6. Use and Management of Equipment and Facilities	•	•	•
7. Animal Handling and Animal Welfare	•	•	•
8. Animal Production and Agricultural Economics		•	•
9. Specimen Collection and Sampling	•	•	•
10. Laboratory and Field Testing	•	•	•
11. Laboratory Quality Management	•		
12. Workflow Management	•	•	•
13. Record Keeping, Data Collection and Management	•	•	•
14. Disease Prevention and Control Programmes	•	•	•
15. Veterinary Products		•	•
16. Food Hygiene	•	•	•

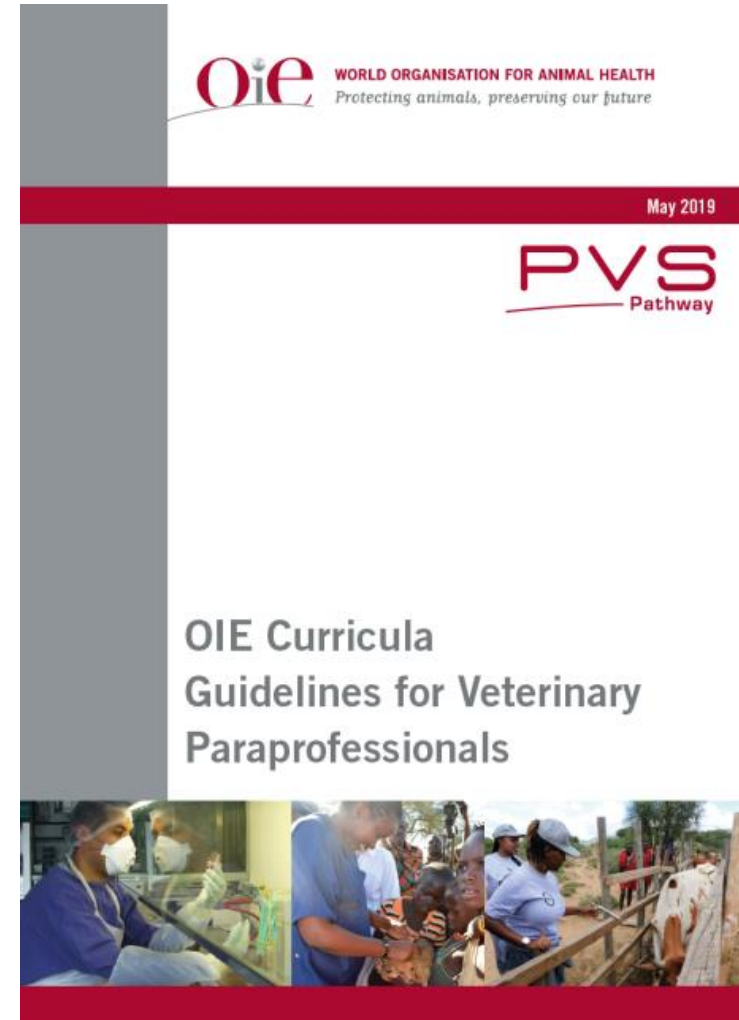


- Courses
  - Units



# Structure of the Document

- Introduction
  - Background, development
  - Overview, structure
  - How to use the Guidelines, scope
- Recommended Curricula Model
  - Modular approach - customise
  - Theoretical courses, units
  - Technical skills development
  - Course outcomes map to SoAs and respective competencies
- Annexes
  - Job Scenarios for each track
  - Entry level vs higher level scenarios



# OIE Curricula Guidelines for Veterinary Paraprofessionals

- Classroom representations of Competencies
- Units:
  - Basic building block for curriculum
  - Combine to create Courses
- Theoretical (blue)
  - Knowledge
  - Foundation
- Technical skills (green)

Course	Units	Course Outcomes
<b>Theoretical</b>		
Principles of Disease Control	Disease Control Programmes & policies General principles	<ul style="list-style-type: none"> <li>• <u>List and describe</u> the various methods used for disease control, specifically: surveillance, compartmentalization, eradication, stamping out, vaccination, quarantine, traceability</li> <li>• <u>Understand and apply</u> foundational epidemiological principles to protect the quality, safety and marketability of foods</li> </ul>
	Epidemiology	
	Specific Disease Control Programmes & policies	<ul style="list-style-type: none"> <li>• <u>List and briefly describe</u> regional control programmes for diseases with food safety and quality, or notifiable significance, e.g. tuberculosis, swine fever</li> </ul>
	Applied Epidemiology tools	<ul style="list-style-type: none"> <li>• <u>Use and advise</u> on how and why specific approaches (e.g. vaccination, stamping out) are used for respective specific disease control programs</li> </ul>
<b>Technical Skills</b>		
VPH Core Skills	Necropsy & gross pathology	<ul style="list-style-type: none"> <li>• <u>Perform</u> necropsies on key production species and <u>identify</u> pathologies that compromise fitness for consumption</li> <li>• <u>Perform</u> post-mortem abattoir procedures (e.g. organ incision &amp; palpation) on key production species</li> <li>• <u>Differentiate</u> normal from abnormal structure and function at the gross level</li> </ul>



# Curricula Guidelines - 22 Core Courses

- Anatomy & Physiology
- Animal Diseases
- Animal Examination, Diagnostic and Therapeutic Techniques
- Animal Production Systems
- Animal Welfare & Ethology
- Clinical Pathology
- Communication
- Field Biosafety and Biosecurity
- Food Hygiene
- Immunology
- Information Technology Applications
- Laboratory Biosafety and Biosecurity
- Laboratory Diagnostic Techniques
- Microbiology
- Parasitology
- Pathology
- Pharmacology and Toxicology
- Primary Animal Health Care Techniques
- Principles of Disease Control
- Professional Jurisprudence & Ethics
- Quality Management
- Veterinary Public Health



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# Suggested Courses by Track

- Course Description and Objectives
- Associated Units
- Later tables offer suggested course structures for each Track
- Example Job Descriptions again

Course Name, Description, and Objectives	Unit Name	AH	VPH	Lab
<b>Anatomy and Physiology</b> Anatomy is the study of structures and organ systems of animals at the gross and microscopic level. Physiology is the study of the normal function of living organisms at the biochemical, cellular, and tissue levels. <u>Course objectives:</u> Students successfully completing the Course will be able to: <ul style="list-style-type: none"> <li>• Identify the structure and function of the major organ systems and corresponding physiological processes</li> <li>• Use proper anatomical terminology to describe major organs of each system, their location, and function</li> <li>• Compare anatomical and physiological differences across common animal species</li> <li>• Understand how anatomical and physiological knowledge can be applied to field practices</li> </ul>	Anatomy and Physiology	✓	✓	✓
	Anatomy and Physiology Practicum	✓	✓	✓
<b>Animal Diseases</b> Animal Diseases is the study of specific infectious and non-infectious diseases. <u>Course objectives:</u> Students successfully completing the Course will be able to: <ul style="list-style-type: none"> <li>• Describe and discuss the aetiology, epidemiological patterns, clinical signs, diagnosis, treatment, prevention, control and public health issues for relevant infectious diseases of importance</li> <li>• Describe and discuss the causes, epidemiological patterns clinical signs, diagnosis, treatment, prevention and control, for relevant non-infectious diseases of importance</li> <li>• Apply knowledge to recognise a specific disease in the field and suggest approaches to treatment, control and prevention</li> </ul>	Zoonoses and Emerging Diseases*	✓	✓	✓
	Infectious Diseases of National Importance	✓	✓	✓
	Non-infectious Diseases of National Importance	✓	✓	✓
<b>Animal Examination, Diagnostic and Therapeutic Techniques</b> The Animal Examination, Diagnostic and Therapeutic Techniques Course provides the practical skills necessary to effectively restrain and clinically examine animals, obtain diagnostic specimens and administer treatments. <u>Course objectives:</u> Students successfully completing the Course will be able to: <ul style="list-style-type: none"> <li>• Understand and interpret the behaviour of relevant animal species in relation to effective restraint and personal safety</li> <li>• Obtain a clinical history from the animal's keeper</li> <li>• Examine the animal's environment in the context of a disease occurrence</li> <li>• Identify and record physical abnormalities</li> <li>• Collect appropriate specimens for diagnosis</li> <li>• Conduct basic therapeutic procedures</li> <li>• Properly use and care for all equipment and supplies associated with restraint, examination, sampling and treatment</li> </ul>	Animal Handling and Restraint Practicum	✓	✓	✓
	Clinical Examination Practicum	✓		
	Specimen Quality Practicum	✓	✓	✓
	Diagnostic and Therapeutic Techniques Practicum I	✓	✓	
	Diagnostic and Therapeutic Techniques Practicum II	✓		



# Intended Use of the Guidelines

- Aim: To produce competent VPPs in a time and resource efficient manner
- Not a strict model – Guidelines. Each country should adapt them
  - Workforce needs: production environment, animal species, disease status, etc
  - Regulatory environment, resources
  - Specific teaching approaches / culture
- Other courses may be needed
- Laboratory: often biomedical basis
- Resource limitations:
  - especially for practical training



# Intended Use of the Guidelines

- Modular: able to be customised
- No training period or sequencing prescribed
- Two training models recognised:
  - **Scaffolded**: start with foundational, theoretical science → later practical, applied skills
  - **Practical**: prioritise skills and application → later backfilling with theoretical knowledge

## Assessment:

- “drives learning”: as important as teaching topics
- Allows outcomes to be clarified and confirmed
- Intended (“on paper”) vs. implemented curriculum (what’s taught) vs. achieved curriculum (what’s learnt)



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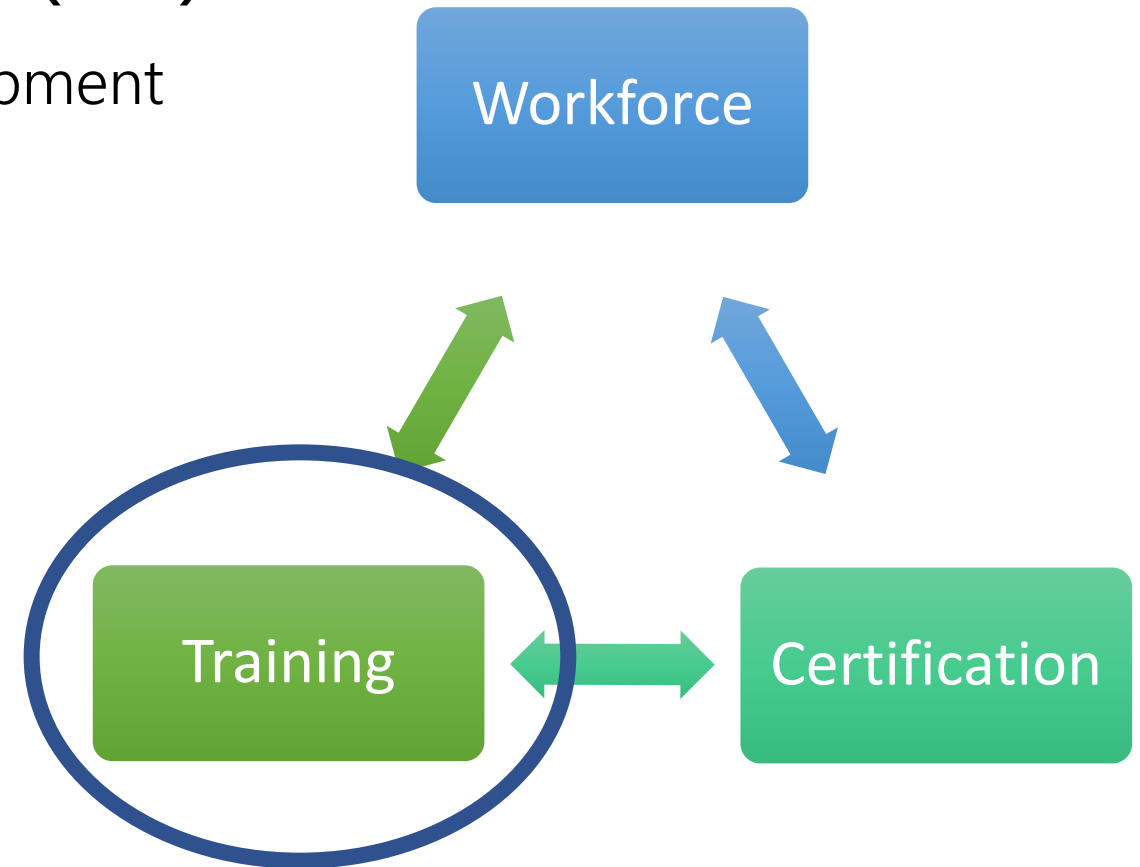
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# Practical Application – Training Stakeholders

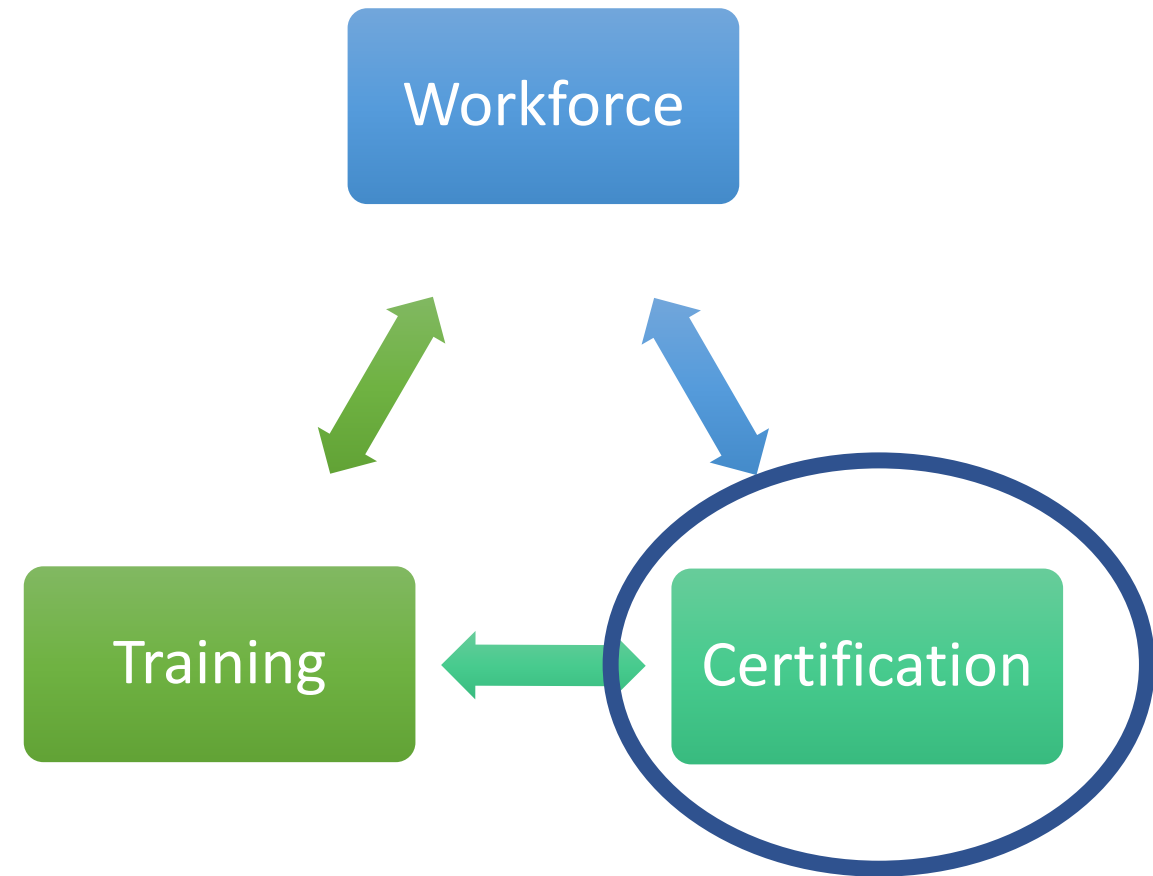
## ■ Veterinary Education Establishments (VEE):

- New programme and curricula development
- Benchmarking and reviewing current programmes



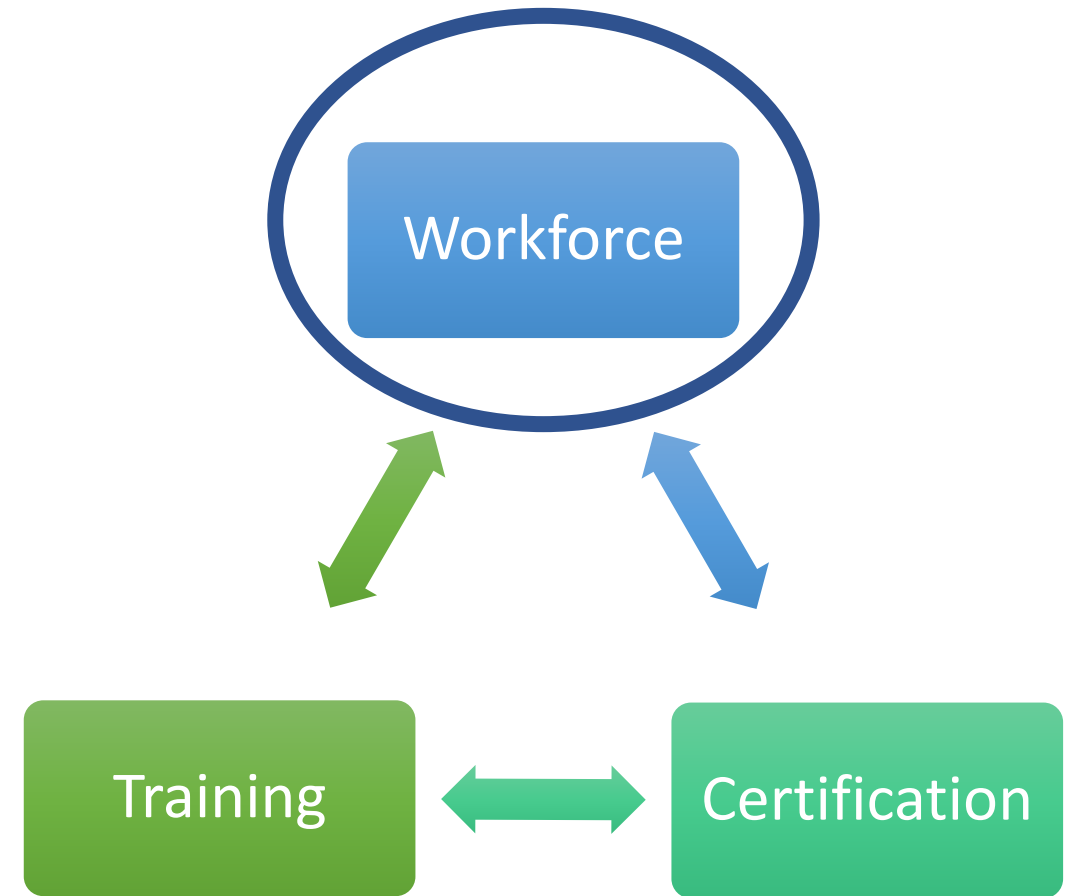
# Practical Application – Regulatory Stakeholders

- **VSBs:** to establish educational qualifications for different categories of VPP
- **Policy makers:** to conduct workforce assessments and staff development planning



# Practical Application – Workforce Stakeholders

- **Veterinary Services and other employers:** guide clear job descriptions, based on competencies, to ensure high quality employees
- **VPPs:** to assess their own levels of knowledge, skills and abilities, identify needs for improvement, and plan for career development







## Exercise

Using the CAM tool to define gaps in curriculum

# Curriculum Alignment Matrix (CAM)

- Tool to map your course against OIE VPP Curricula Guidelines
- Why?
  - Design of new programs, courses
  - Re-design, updating, review
  - Benchmarking against:
    - OIE Guidelines
    - Local/regional standards
    - Other VEEs
  - Development of local or regional standards
- Noting:
  - OIE docs are Guidelines, not Standards
  - No obligation to match OIE
  - A comparative/discussion tool

OIE Competency Guidelines for Veterinary Paraprofessionals	OIE Curricula Guidelines for Veterinary Paraprofessionals
	
<p>The <i>ad hoc</i> group completed the preparation of the proposed competencies for the three VPP categories in 2018 and those competencies have now been published as the <b>OIE Competency Guidelines for Veterinary Paraprofessionals</b>.</p>	<p>The <i>ad hoc</i> group has also completed the development of the <b>OIE Curricula Guidelines for Veterinary Paraprofessionals</b>. The purpose of this document is to help veterinary paraprofessional training institutions to develop curricula in all three tracks to produce veterinary paraprofessionals with the desired competencies. A Curriculum Alignment Matrix (CAM) Tool has also been developed which allows a training institution to compare its Veterinary Paraprofessional (VPP) training programme against the OIE Curricula Guidelines for Veterinary Paraprofessionals to determine alignment, or “match” with these Guidelines. The CAM Tool is available <a href="#">here</a> and instructions for its use are <a href="#">here</a>.</p>

# What is the CAM tool?

- A matrix that aligns the Learning Objectives of your course with the Learning Objectives of the OIE Curriculum
- Visually indicates the level of similarity between your course and the OIE Curriculum

OIE VPP Curricula Guideline courses, units and associated learning objectives

Total number of occurrences of OIE unit alignment with the Member Country curriculum

OIE Curriculum Recommendations			Country Programme Courses																	
Course	Unit	Learning Outcomes	Course	Animal Anatomy	Animal Physiology	General Microbiology	General Pathology	Immunology and Vaccinology	Soil Science	Community Development	Biochemistry	Biostatistics and Computer Applications	Pharmacology	Animal Parasitology	Toxicology	Clinical Pathology	Animal Health Applied Skills	Animal Genetics & Breeding		
			# Occurrences																	
Animal Production Systems	Zootechnology (breeds, husbandry, housing, etc)	Describe farming systems of major importance for animal production. List and identify the different breeds of species and their production characteristics.	1																	
	Nutrition and pasture management	Describe the macro and micro nutrients necessary to provide proper nutrition to various animal species.	2																	
		Identify foodstuffs used in animal nutrition and their nutritional value.	2																	
		Identify edible grasses and toxic plants at pasture. Describe certain nutritional deficiencies and the clinical conditions that might result.	2																	
	Agricultural economics	Identify the practical applications of the principles of agricultural economics to the profitable management of various animal production systems. Describe market trends for commodities produced in different animal production systems.	0																	
Herd health management / reproduction	Identify and describe the important routine activities that farmers should carry out to ensure the optimal health and productivity.	3																		
	Identify and describe the important routine activities that farmers should carry out to ensure the optimal reproductive performance	3																		
Pharmacology and Toxicology	Principles of toxicology	Recognise conditions caused by toxic substances and suggest measures for the treatment and prevention of these conditions.	1																	
		Identify and list the main classes of drugs and their functions utilized in the treatment of animal species.	1																	
	Principles of pharmacology	For bacterial infectious diseases, select and justify the selection of a specific antimicrobial drug.	1																	
Demonstrate the ability to calculate the amount of drug to administer to an animal based on the prescribed dosage, the animal's weight and the concentration of the drug.		1																		
Animal welfare and ethology	Animal welfare	Describe the conditions for humane husbandry for animals in different production systems.	1																	
		Describe the principles and practices of humane slaughter.	1																	
	Ethology	Describe some of the scientific methods used to assess animal welfare.	2																	
Apply the principles of ethology to analyze and understand behaviour in any species.		2																		

Courses from the Member Country curriculum

Total number of occurrences of Member Country curriculum alignment with OIE units

Filled cells indicate points of alignment



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# Group Exercise: Using CAM to define gaps in curriculum of AH track

## Materials supplied:

- Template CAM tool – excel spreadsheet, as downloaded from the OIE website
- Example Country Curriculum – excel spreadsheet representing 4 example courses
- CAM Instructions for Use – PDF document

## Task:

- Read the Course description for the example course
- Go to the CAM tool, and add the Course code/title to the first empty column
- Identify which OIE Course/Unit Learning Outcomes match the example course
- Place a “1” in the corresponding cell in that course’s column
- Continue until all relevant OIE Learning Objectives have been included



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