The Role of Veterinary Public Health

**Veterinary Public Health**: The component of public health activities devoted to the application of professional veterinary skills, knowledge, and resources to the protection and improvement of human health (WHO, 1975)
The Role of Veterinary Public Health

- Prevention and control of Zoonotic diseases
- Food protection
- Environmental protection
- Veterinary public health services
  - Pet-facilitated therapy
  - Animal monitoring for public health hazards
  - Animal model laboratories
  - Community services
Veterinary Public Health

Zoonoses
- Zoonoses
- Epidemiology

Environmental health

Food protection
- Food Microbiology
- Food Chemistry
- Meat Hygiene
- Milk Hygiene

VPH services
Prevention and control of Zoonotic diseases

Veterinary responsibilities

- Protect humans from exposure to diseases transmitted from animals
- Protect animals from zoonotic infections
- Educate clients and public to protect themselves from zoonotic diseases
- Apply epidemiology (herd health medicine) to determine the source of disease in animals and the dynamics of transmission
- Disease surveillance and eradication program
- Disease prevention and control
Prevention and control of Zoonotic diseases

Course objectives
- to understand the public health aspects of zoonotic diseases
- to protect the public health from exposure to diseases (direct and indirect contact)
- to apply epidemiology to the practice of veterinary medicine

Course topics
- public health impact of zoonoses
- Major zoonotic diseases
- Newly recognized and emerging zoonoses
- Basic concepts in epidemiology
Veterinary Public Health

- Center for Disease Control and Prevention (CDC)
- Veterinary epidemiologic section, Department of Livestock
- Bangkok metropolitan
Food protection
(Hygiene of foods of animal origins)

- Veterinary responsibilities
  - play a major role in food quantity, quality and safety
  - provide an adequate and wholesome food supply
    - production of healthy animals
    - slaughter and process of food animals
    - inspection of animal products
Food protection
(Hygiene of foods of animal origins)

Course objectives
- to understand the roles of veterinary medicine in ensuring that meats, milk, eggs are safety and wholesome.
- to understand principle in hygiene of eggs, milk and edible animal products.
- to know microbiological criteria and chemical composition of foods

Course topics
- Food microbiology and chemistry
- Residues and toxins in foods of animal origins
- Meat and milk hygiene
- Inspection of food animals for infectious diseases, parasitic diseases and toxic agents
Veterinary Public Health

- USDA
- US-FDA (Food and Drug Administration)
- US-FSIS (Food safety and inspection services)
- Division of Veterinary public health, Department of Livestock
Environmental Health

- Veterinary responsibilities
  - protect both the rural and urban environment from degradation by animal concentrations
  - protect humans and animals from adverse environmental effects
  - identify safe water supplies
    - advise water protect
    - diagnose waterborne diseases and toxicoses
  - advise on human health hazard associated with animals and animal wastes
Environmental Health

Course objectives

- to assess designs and operations of livestock operations for their environmental pollution and to assist in control of the pollution
- to understand microbiological and chemical water-safety standards
- to understand principles of agricultural waste management and to be able to guide in preventing hazards of disease transmission and toxic agents

Course topics

- Environmental impact of livestock operations
- Water safety for animals and humans
- Local and legislative actions; regulations; permits
Veterinary Public Health

- EPA (Environmental Protection Agency)
- Thai- EPA
Veterinary public health services

- Pet-facilitated therapy
  - Animal welfare
  - Companion animals and mental well-being
    - Guide dog
    - Dog for handicap

- Animal monitoring for public health hazards
  - Animals show signs of diseases
    - canine cancer and asbestos exposure
    - Feline lead poisoning: Minamata
Veterinary public health services

- Animal model laboratories
  - Laboratory safety (Diagnosis and Research)
  - Vaccine and serum
  - Xenodiagnostic laboratories
- Community and international health
  - Participation in community services through expertise in veterinary medicine
  - Community health and well-being
  - Education
# Food hygiene I

**Food Microbiology**

**Food Chemistry**

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Course schedule is available in PDF format at http://www.vet.chula.ac.th/~VPH
Course syllabus is available in PDF format at http://www.vet.chula.ac.th/~VPH
Handouts are available in HTTP and PDF format at http://www.vet.chula.ac.th/~VPH
Evaluation

- Quiz 10%
- Midterm 45%
- Final 45%

Text books

- Food Toxicology, Part B: Contaminants and Additives, Zos, M. C., 1988.