



DEPARTMENT OF VETERINARY PUBLIC HEALTH & EPIDEMIOLOGY

About Department

The Department of Veterinary Public Health & Epidemiology, College of Veterinary Science and Animal Husbandry, Kamdhenu University, Bhuj, is a newly established yet highly significant academic and research unit. Located in the border district of Kutch, the department will address critical challenges at the animal–human–environment interface, with a focus on food hygiene, zoonotic diseases, epidemiology, and environmental health. Kutch, known for its unique biodiversity and possessing the second largest livestock population in Gujarat, offers unparalleled opportunities for research, teaching, and community outreach in veterinary public health & Epidemiology. The department will be committed to advancing the principles of One Health, fostering collaboration across sectors to safeguard both animal and human well-being. The department commenced its journey on 1st August 2025 with the appointment of Dr. J. H. Chaudhary as the founding faculty member, serving as Associate Professor and Head. Under his leadership, the department envisions the establishment of a state-of-the-art laboratory in line with MSVE 2016 guidelines, ensuring excellence in diagnostics, surveillance, and research. A major thrust area of the department is to undertake baseline epidemiological studies and prevalence surveys of zoonotic and emerging diseases in the Kutch region, where such systematic data is currently lacking. In addition, the department places strong emphasis on extension and outreach activities, creating awareness on food safety, public health, and zoonotic disease prevention among stakeholders and communities.

Core Areas of Focus

- Zoonotic diseases and epidemiological research
- One Health–based collaborative initiatives
- Food safety and hygiene
- Environmental health and hygiene
- Community extension and outreach programs

With its vision and dedication, the Department of Veterinary Public Health & Epidemiology aims to emerge as a centre of excellence in teaching, research, and community service in future, contributing to the sustainable health and development of the Kutch region and beyond.

Faculty Details

	Name:	Dr. Jeetendrakumar Harnathbhai Chaudhary
	Designation:	Associate Professor & Head
	Qualification:	Ph. D.
	Experience:	11 Years
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Summary of Publications

Sr. No.	Detail	Numbers
1.	Research Paper (National Journal)	19
2.	Research Paper (International Journal)	15
3.	Short Communications	02
4.	Recommendations	03
5.	Book/ Booklets	02
6.	Chapters in Books	10
7.	Training Manual / Practical Manual	06
8.	Technical Bulletins	02
9.	Review articles in scientific journals	02
10.	Popular articles in vernacular languages	28
11.	Informative leaflets / folders for farmers	12

Research

Sr. No.	Research Activities	Numbers
1	Research Projects Completed (AGRESCO & VASRC)	24 (PI-13, Co-PI-11)
2	Research Projects Running (AGRESCO & VASRC)	3 (PI-2, Co-PI-1)
3	Research Projects: As Co-PI	04
4	Recommendation	03
5	Research articles	34
6	Book Chapters	10
7	Research Abstracts	62
8	Reviewer of Journal	6
9	Editorial Board member	3

Extension

Sr. No.	Extension Activities	Numbers
1	Vernacular Expert Lectures	113
2	Animal Health Camp	4
3	Extension literature (Folder & Leaflet)	12
4	Popular articles	28
5	TV Talk & Radio Talk	6

Achievements

Sr. No.	Details	Number of Awards
1.	Scientific awards	13
2.	Best vernacular article awards	2
3.	Conference/Training/Seminar-Hosted	5

UG Academics

UG Course (As per VCI MSVE 2016 course curriculum)

Sr. No.	Course offered in Third Professional Year	Credits Hours
1	Veterinary Public Health & Epidemiology	3+1

UG Syllabus – Third Professional year

Theory

Unit	Contents
Unit 1	(VETERINARY PUBLIC HEALTH AND FOOD SAFETY) Aims and scope of Veterinary Public Health. Role of veterinarians in public health. One Health concept and initiatives. Veterinary Public Health administration. Sources of contamination. Principles and concepts of food hygiene and safety. Milk hygiene in relation to public health. Hygienic and safe milk production practices including steps for prevention and control of milk contamination, adulterants, antimicrobial residues, agrochemicals, subclinical mastitis or udder infections. Microbial flora of milk and milk products. Milk plant and dairy equipment hygiene. Quality control of milk and milk products. Milk hygiene practices in India and other countries. Elements of meat inspection and meat hygiene practices. Pathological conditions associated with the transport of food animals. Hygiene in abattoirs and meat plants. Detection of conditions or diseases and judgements during ante mortem and post mortem inspection. Examination of lymph nodes. Meat as a source of disease transmission. Sources of contamination of meat and methods of carcass decontamination. Speciation of meat. Animal welfare and public health issues. Classification of low risk and high risk material generated in an abattoir and its hygienic disposal. Inspection of poultry for human consumption. Occupational health hazards in abattoir and meat plants. Foodborne infections and intoxications associated with foods of animal origin. Toxic residues (pesticides, antibiotics, metals and hormones) in foods and associated health hazards. Types of biohazards. Hazard analysis and critical control points (HACCP) system. Importance of ISO 9000 and 14000 series in meat industry. Risk analysis, assessment and management. International food safety standards: World Organisation for Animal Health (OIE), World Trade Organization (WTO) agreements and Codex Alimentarius Commission. Sanitary and phytosanitary measures in relation to foods of animal origin. Food Safety and Standards Act and Regulations. Role of Food Safety and Standards Authority of India (FSSAI), Bureau of Indian Standards (BIS) and other national agencies.
Unit 2	(VETERINARY EPIDEMIOLOGY) Definitions, components and aims of epidemiology. Factors influencing occurrence of livestock diseases and animal production. Determinants of disease. Transmission and maintenance of infections. Ecology of disease. Measures and patterns of disease occurrence. Survey and surveillance of animal diseases and related parameters. Epidemiological methods- Descriptive, analytical, experimental, theoretical, serological and molecular. Animal disease forecasting. Strategies of disease management: prevention, control and biosecurity. Economics of animal diseases. National and international regulations on livestock diseases. Role of OIE and laws on international trade of animals and animal products.
Unit 3	(ZOO NOTIC DISEASES) Definition, history and socio-economic impact of zoonotic diseases. Classification of zoonoses and approaches to their management. Multisectoral approach for zoonoses prevention and control. Emerging, re-emerging and occupational zoonoses. Role of domestic, wild, pet and laboratory animals and birds in transmission of zoonoses. Zoonotic pathogens as agents of bioterrorism. Epidemiology, clinical manifestations and management of the following zoonoses: Rabies, Japanese encephalitis, influenza, Kyasanur forest disease, Crimean Congo haemorrhagic fever, Nipah encephalitis, Ebola virus infection, anthrax, brucellosis, tuberculosis, leptospirosis, listeriosis, plague, glanders, Q fever, rickettsiosis, chlamydiosis, taeniasis, cysticercosis, hydatidosis, larva migrans, diphyllorhynchiasis, trichinellosis, toxoplasmosis, fasciolosis, paragonimiasis, sarcocystosis, cryptosporidiosis, amoebiasis, giardiasis, leishmaniasis, superficial and systemic mycosis and prion diseases. Foodborne bacterial zoonoses: salmonellosis, E. coli infection, staphylococcal gastroenteritis, clostridial food poisoning, campylobacteriosis etc.
Unit 4	(ENVIRONMENTAL HYGIENE) Scope and importance. Ecosystem: Components structure and functions. Biodiversity: uses, threats and conservation. Natural resources: types, uses and abuses. Environmental contaminants in food chain-bioaccumulation, biomagnification and persistent organic pollutants. Environmental pollution: Sources, nature of pollutants, effects on animal and human

	health. Rural and urban pollution. Air pollution, sources and hazard. Air pollution in animal houses, effect on health and productivity. Airborne diseases – Classification, health hazard, prevention and control. Water-Sources, contamination & their prevention. Water qualities-Physical, chemical, bacteriological and radiological. Water purification methods for community water supplies. Waterborne diseases – Classification, health hazard, prevention and control. Soil, marine and thermal pollution- Classification, sources, hazard, prevention and control. Noise pollution – Sources, hazards, prevention and control. Nuclear hazards or radiological hazard-Types, hazards and radiation protection. National rules and legislations related to environmental pollution and role of pollution control board in India. Biosafety: Importance, classification and biosafety measures for prevention of risk hazards. Disaster management and mitigation. Solid and liquid waste management at farms and biomedical waste management. Sanitation and disinfection of farm and hospital environment in veterinary public practice for infection control. Global warming and greenhouse effect- Definition, greenhouse gases, impact of climate change and international treaties or protocols. Management of waste from animal industries. Stray and fallen animal management and carcass disposal. Vector and reservoir control.
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Practical

Unit	Contents
Unit 1	Veterinary Public Health and Food Safety Collection of samples for chemical and bacteriological examination. Grading of milk by dye reduction test, direct microscopic examination and standard plate count. Quality assurance tests for processed milk and milk products. Tests for plant sanitation-Air, water and equipment. Microbiological examination of raw milk, pasteurized milk, milk products, meat, meat products and eggs-standard plate count, coliform count, enterococcal count, psychrophilic and psychrotrophic organisms, thermophilic bacteria and yeast and mold count. Detection of organisms of public health significance from food products by techniques. Tests for detection of mastitis milk. Ante-mortem and post-mortem inspection of food animals. Demonstration or detection of toxic chemicals and contaminants of public significance from milk and meat. Detection of antimicrobial residues in milk and meat by microbiological and analytical techniques. Demonstration of speciation of meat.
Unit 2	Veterinary Epidemiology Sampling methods for epidemiological studies. Measurement of disease frequencies. Sources, storage, retrieval and representation of disease information or data. Demonstration of selected software programmes or models. Evaluation of sensitivity and specificity of diagnostic tests by epidemiological methods. Determination of associations of disease and hypothesized causal factors. Survey of an animal disease on a farm. Epidemiological investigation of disease outbreaks.
Unit 3	Zoonotic Diseases Detection, isolation and identification of important pathogens of zoonotic importance from animal, human and environmental sources including foods of animal origin. Detection of zoonotic diseases by serological, molecular and hypersensitivity tests. Study of probable association of human diseases conditions with animal diseases present in an area. Study of rural environment and health status of rural community.
Unit 4	Environmental Hygiene Sampling methods for testing quality of air, water, soil and other environmental sources. Physical, chemical and microbiological examination of water. Estimation of residual chlorine and chlorine demand. Isolation & identification of pathogens from air, water and other environmental sources. Disinfection of animal houses. Determination of efficacy of disinfectants – Phenol coefficient, MIC and MBC. Demonstration or visit to water purification system. Demonstration of various ventilation systems in animal houses and specialized laboratories. Demonstration of toxic residues in water and other environmental sources. Visit to local polluted site and documentation of local environmental problems – like dumping grounds, local slum areas, crowded localities etc.

Syllabus Distribution for Annual Board Examination:

Examination	PAPERS	UNITS	MAXIMUM MARKS	WEIGHTAGE
Internal Assessment	First	30 % (Unit 1 and 2)	40	10
	Second	60 % (Unit 2 and 3)	40	10
	Third	90 % (Unit 3 and 4)	40	10
Annual Board	THEORY			
	Paper-I	Unit 1 and 2	100	20
	Paper-II	Unit 3 and 4	100	20
	PRACTICAL			
	Paper-I	Unit 1 and 2	60	20
	Paper – II	Unit 3 and 4	60	20

PG Academics**Summary of PG student:**

Sr. No.	Details	No. of Students passed out	No. of Students presently enrolled
1.	Master	-	-
2.	Doctorate	-	-
3.	Total	-	-

To be started in next academic year (2026-27)**PG Courses**

Sr. No.	Course Code	Title of Course	Credit Hours
1.	VPE-501	Concepts in Veterinary Public Health and One Health	2+0
2.	VPE-502	Zoonoses-I	2+1
3.	VPE-503	Zoonoses-II	2+1
4.	VPE-504	Principles of Epidemiology	2+1
5.	VPE-505	Hygiene and Safety of Foods of Animal and Aquatic Origin	2+1
6.	VPE-506	Food-borne Infections and Intoxications	2+1
7.	VPE-507	Food Safety Standards, and Regulations	2+1
8.	VPE-508	Environmental Hygiene and Safety	2+1
9.	VPE-509	Applied Epidemiology	2+1
10.	VPE-510	Biosecurity, Bioterrorism and Disaster Management	2+0
11.	VPE-511	Laboratory Techniques in Veterinary Public Health	0+3
12.	VPT-591	Master's Seminar	1+0
13.	VPT-599	Master's Research	20

Ph. D. Courses

Sr. No.	Course Code	Title of Course	Credit Hours
1.	VPE-601	Advances in Veterinary Public Health and Epidemiology	2+1
2.	VPE-602	Emerging, Re-emerging Zoonoses and One Health	2+1
3.	VPE-603	Advances in Food Safety and Quality Control of Foods of Animal/ Aquatic origin	2+1
4.	VPE-604	Biosecurity and Occupational Health Safety	2+1

5.	VPE-605	Recent Concepts in Epidemiology and Disease Forecasting	2+1
6.	VPE-606	Risk Analysis and Predictive Modelling	2+1
7.	VPE-607	Advances in Environmental Hygiene	2+1
8.	VPE-608	Herd Health Management and Disease Economics	2+1
9.	VPE-609	Epidemiology of Trans-boundary, Non-infectious and Chronic disease	2+1
10.	VPE-610	Ecology and Animal/ Human Health	2+0
11.	VPE-611	Diagnostic Approaches in Epidemiology	2+1
12.	VPE-612	Surveys, Surveillance and Data Management	2+1
13.	VPE-613	Research Methodology and Publication Ethics in VPE	2+0
14.	VPE-690	Special Problem	0+1
15.	VPE-691	Doctoral Seminar I	1+0
16.	VPE-692	Doctoral Seminar II	1+0
17.	VPE-699	Doctoral Research	75

PG Examination Patterns

Sr. No.	Examination	Theory	Practical
1.	Self-study (Assignment/ Presentation)	20	-
2.	Internal tests:- First Test Mid Term Test	10 20	- 50
3.	Semester End Examination	50	50
	Total Marks	100	100

Research areas of the Department

1. Antimicrobial Resistance (AMR) Mapping
2. Zoonotic Disease Surveillance & Control
3. Food Safety & Milk Chain Hygiene
4. One Health Surveillance & Outbreak Preparedness
5. Vector- and Tick-borne Disease Dynamics
6. Foodborne Pathogens & Enteric Diseases
7. Environmental Health & Contamination
8. Spatial Epidemiology & Risk Mapping

Contact details

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