



## ARS for PhD in Veterinary Medical Sciences (Animal and Environment Hygiene)

### 1) Graduate attributes

*The graduate should have the ability for:*

- 1) Mastering the basics and methodologies of scientific research in Animal and Environment Hygiene for better dealing with hygienic problems professionally.
- 2) Performing continuous effort to add knowledge about detection of causes and control of diseases.
- 3) Analysis and characterization of information in Animal and Environment Hygiene and fields related to Hygiene including Parasitology, Virology, Bacteriology and Zoonoses.
- 4) Integrating data collected from the field with related laboratory findings to reach the correct diagnosis cause of infective agent.
- 5) Showing deep awareness with the ongoing hygienic problems and modern theories in handling animals to control the disease.
- 6) Identifying the main causes of infection and suggesting the appropriate methods of animal and human protection.
- 7) Mastering of a wide range of professional skills in Animal Hygiene, laboratory investigation of trace evidences and modern techniques performed for diagnosis.
- 8) Acquiring trends towards developing modern methods and tools in disinfection procedures.
- 9) Using appropriate technological means including molecular biology, immunoaffinity chromatography to serve professional practice.
- 10) Communicating effectively with veterinarians, pathologists, students and colleagues and leading work team through professional scale.
- 11) Making decision in different professional situations especially under field conditions to deal with hygienic problems.
- 12) Using of the available resources efficiently in the development of new techniques and work to find new resources.
- 13) Being aware with his role in society development and community awareness of Animal Hygiene and pollution of the environment.
- 14) Acting with integrity, credibility and according to the rules of profession.
- 15) Realizing the importance of self and life-long learning and progress.

### المقررات التي تحقق المعايير الأكاديمية للبرنامج

Code	Name
640	Radiation biochemistry
672	Bacteriology (general)
679	Diagnostic microbiology
680	General virology
691	Clinical parasitology
709	Food poisoning

710	Hygiene and control of dairy plants
719	Hygiene and control of meat and fish plants
741	Environmental toxicology
767	Prevention in poultry field
769	Farm animal hygiene (advanced)
770	Poultry hygiene (advanced)
771	Environmental hygiene and pollution
772	Combating epidemic diseases
773	Control of pests and disease vectors
774	Insecticides and animal hygiene
775	Animal farm hygiene
776	Disinfection and disinfectants
778	Zoonoses
781	Epidemiology of zoonotic diseases
782	Control of zoonotic diseases
814	Epidemiology of aquatic diseases

### مقارنة ما يقدمه البرنامج من نتائج تعليمية مستهدفة مع المعايير المرجعية القياسية

#### A) Knowledge and understanding

Adopted ARS		NARS (PhD)	
	<i>By the end of this program the graduate should understand and accommodate the following:</i>		<i>By the end of this program the graduate should understand and accommodate the following:</i>
1)	Recent theories, principles and knowledge in recognizing the cause of infectious diseases in addition to control of epidemic diseases.		Recent theories, principles and knowledge in the field of specialization and related areas
2)	Principles methodologies and ethics of scientific research and its tools including using laboratory animals and virulent pathogens in research		Basics, methodologies and ethics of scientific research and its different tools
3)	Legal and ethical principles of dealing with animals, owners and colleagues.		Legal and ethical principles of professional practice in the area of specialization
4)	Principles and the basics of quality assurance in laboratory examination of pathogens and pollutants.		Principles and the basics of quality assurance in the area of professional practice in the field of specialization
5)	Awareness with the effect of pathogens and pollutants on the animal wealth and methods for enhancing animal hygiene.		Awareness with the effect of professional practice on the environment and methods of its maintain and development

#### B) Intellectual skills

Adopted ARS		NARS (PhD)	
	<i>By the end of this program the graduate should</i>		<i>By the end of this program the graduate should understand and</i>

	<i>understand and accommodate the following:</i>	<i>accommodate the following:</i>
1)	Analyzing and evaluating information about epidemic diseases, outbreaks, contagious diseases or problems of environmental pollution	Analyzing and evaluating information in the field of specialization and the eliciting from them
2)	Combating epidemic diseases using suitable quarantine measure, disinfectants and other measures	Solving professional problems using available data
3)	Performing scientific research studies that can give significant impact on the role of hygiene in prevention of diseases.	Conducting scientific research studies that add to knowledge
4)	Formulating scientific papers in animal hygiene.	Formulating scientific papers
5)	Risk-assessment of environmental pollution by pathogens and toxicants	Risk-assessment in the field of specialization
6)	Planning to enhance the performance in the laboratory diagnosis of farm animal problems.	Planning to enhance the performance in field of specialization
7)	Making professional decisions for selecting the ideal method of treating animals under field condition to minimize the disease in man.	Making professional decisions under different professional contexts
8)	Trying new methods for disinfection of animal enclosures.	Creation and innovative in the area of specialization
9)	Open discussions in Animal and Environment Hygiene based on disease evidences and proofs	Dialogue and discussion based on evidences and proofs

### **C) Professional and practical skills**

	<b>Adopted ARS</b>	<b>NARS (PhD)</b>
	<i>By the end of this program the graduate should understand and accommodate the following:</i>	<i>By the end of this program the graduate should understand and accommodate the following:</i>
1)	Mastering basic and modern professional skills in investigation of causes of infectious diseases including viral, bacterial, fungal and parasitic pathogens using advanced techniques	Mastering basic and modern professional skills in the area of specialization
2)	Writing and evaluating professional reports involving the harmful effect of pathogens on different animals and man.	Writing and evaluating professional reports
3)	Evaluating and modernizing methods and tools in animal hygiene testing in addition to molecular methods of diagnosis.	Evaluating and modernizing methods and tools in the area of specialization
4)	Using modern technological means to serve protection of animals and man against pathogens.	Using modern technological means to serve professional practice
5)	Planning for the improvement of veterinary medicine by applying recent molecular techniques in animal hygiene and developing performance of others.	Planning for the improvement of professional practice and developing performance of others

**D) General and transferable skill**

<b>Adopted ARS</b>		<b>NARS (PhD)</b>
	<i>By the end of this program the graduate should understand and accommodate the following:</i>	<i>By the end of this program the graduate should understand and accommodate the following:</i>
1)	Communicating effectively with physicians, other health professionals, and health related agencies.	Effective communication
2)	Using the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.	Utilizing information technology to serve development of professional practice
3)	Presenting information clearly in written, electronic and oral forms	Teaching others and evaluating their performance
4)	Establishment of life-long self-learning required for continuous professional development.	Self-assessment and continuous learning
5)	Using different resources to obtain knowledge and information	Using different resources to obtain knowledge and information
6)	Team working and leading a team in familiar professional contexts	Team working and leading a team in familiar professional contexts
7)	Management of time and open discussions in the professional field	Management of scientific meetings with the ability to manage time efficiently

