Academic Reference Standards (ARS)

For Master Program in Milk Hygiene and Control

Graduate attributes

The graduate should have the ability for:

Upon successful completion of the program, the graduate must be able to:

Apply efficiently the basics and methodologies of scientific research in milk hygiene and control with the use of its different tools.

1) Apply and use analytical methods of analysis of chemical constituents of milk and its products and detection of public health hazards in dairy products.
2) Apply the gained specialized recent knowledge in dairy chemistry, microbiology and technology and assuring the safety of milk and dairy products.
3) Be aware with the modern concepts in microbiology and chemistry of milk and dairy products and ongoing problems facing their production and affecting their quality.
4) Identify the problems of milk and dairy products quality and suggest solutions for dairy industry.
5) Master an appropriate domain in specialized professional skills using modern technological techniques in milk analysis and quality assurance.
6) Communicate effectively and lead work team of milk and dairy products quality and control specialists and dairy plants owners and milk producers.
7) Make decision under different professional situations upon findings of milk inspection and analysis and according to Egyptian and international quality standards.
8) Employ the available resources like physical examination, laboratory findings and inspection of dairy plant and use these recourses efficiently.
9) Be aware with his role in society development and community preservation by conserving public health and providing high quality healthy milk and dairy products.
10) Reflect the commitment to act with integrity, credibility, and the rules of profession
11) Realize the importance of self and life-long learning and progress in field of milk quality assurance and control.

المقررات التي تحقق المعايير الأكاديمية للبرنامج

Code	Name
704	Dairy hygiene and control (advanced)
705	Dairy microbiology
706	Dairy technology and preservation
707	Food analysis (specific courses)
708	Specific courses in milk contamination and diseases transmitted by milk and hygiene of eggs, oils and fats
709	Food poisoning
710	Hygiene and control of dairy plants
778	Zoonoses – advanced
672	Bacteriology (general)
673	Bacteriology (special)
784	Genetic of microorganisms
639	Microbial biochemistry and biotechnology
675	Mycology (advanced)
736	Udder and calve infectious diseases
	Hygiene of cattle housing

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

A) Knowledge and understanding

	Adopted ARS	NARS
	By the end of this program the graduate should understand and accommodate the following:	***By the end of this program the graduate should understand and accommodate the following:***
1)	Basics of microbiological investigation, chemical analysis and quality control of milk and dairy products.	Theories and principles in the field of specialization and related fields.
2)	The mutual effect of insuring milk and dairy products quality and conserving public health by providing safe and high quality dairy products.	Mutual effect between professional practice and its impact on environment
3)	The scientific progress in production, processing and analysis of milk and dairy products and their quality control.	Scientific progress in the field of specialization
4)	The legal and ethical basics in examination of milk and dairy products.	Legal and ethical basics in professional practice in the field of specialization
5)	The quality assurance of laboratory facilities and different procedures of food analysis to get accurate and reliable results, insuring milk quality by application of different control programs during production of and processing of it like HACCP and ISO	Principles and basics of quality assurance in the area of specialization
6)	The basics and ethics of scientific research especially that involving examination of milk and dairy products.	Basics and ethics of scientific research

B) Intellectual skills

	Adopted ARS	NARS
	By the end of this program the graduate should understand and accommodate the following:	***By the end of this program the graduate should understand and accommodate the following:***
1)	Analyze and judge the information in dairy chemistry, microbiology and technology and analog to solve their quality problems.	Analysis and judgment of information in the field of specialization and analog to solve problems.
2)	Find clues for manufacturing and microbiological problems of milk and dairy products even in scarcity of information.	Solving professional problems even in scarcity of data.
3)	Relate between different knowledge and experiences to control dairy quality problems during production and processing.	Relating between different knowledge to solve professional problems.
4)	Participate in preparing research plan in and/ or write scientific article on a current research problems in dairy industry.	Preparing research plan in specialization and/ or writing scientific article on a research problem.
5)	Assess risks facing dairy quality control and finding the way to overcome them.	Risk-assessment of professional practices in specialization.
6)	Plan for improvement performance during dealing with problems in dairy plant, farm and laboratory to support proper decision making and efficient control of milk quality.	Planning for improvement of professional performance.
7)	Using appropriate intellectual strategy to deal with laboratory results of different milk quality items complying them with quality standards to make a proper decision.	Taking professional decisions in a variety of professional contexts.

C) Professional and practical skills

	Adopted ARS	NARS
	By the end of this program the graduate should understand and accommodate the following:	***By the end of this program the graduate should understand and accommodate the following:***
1)	Master basic and recent professional skills in the assessment of dairy products and milk quality and its control.	Mastering basic and recent professional skills in the field of specialization
2)	Constructing a conclusive professional reliable reports help in judgment on milk quality and evaluates and interprets any reports in a proper manner to achieve dairy quality control.	Writing and evaluating professional reports.
3)	Planning a research project in the field of hygiene and control of milk and dairy products with a consideration to the technical, ethical and safety issues and associated costs.	Evaluating existing materials and methods in the area of specialization.

D) General and transferable skill

	Adopted ARS	NARS
	By the end of this program the graduate should understand and accommodate the following:	***By the end of this program the graduate should understand and accommodate the following:***
1)	Communicating effectively with teaching staff, colleagues and the community.	Effective communication.
2)	Using information technology in scientific research and publications.	Utilizing information technology to serve development of professional practice.
3)	Demonstrating appropriate attitude towards teaching staff and colleagues.	Self-assessment and determination of personal educational needs.
4)	Identifying and use different sources of information and knowledge.	Using different resources to obtain knowledge and information.
5)	Set tools and indicators for assessment of the performance of others.	Establishing rules and indicators for assessment of the performance of others.
6)	Demonstrate interpersonal skills and team working ability	Team working and leading a team in familiar professional contexts.
7)	Manage time efficiently.	Efficient time management.
8)	Demonstrate an ability to learn independently for a career of lifelong learning.	Self and continuous learning.