

Human and Animal Food Laboratory Professionals Curriculum Framework

A team of Subject Matter Experts (SMEs) are building a competency-based curriculum framework for human and animal food laboratory professionals (shown below).

The purpose of the framework is to identify the competencies (knowledge, skills, and abilities) needed by a laboratory professional throughout his or her career. The framework is not used to develop training; rather, the competencies contained within the framework describe a competent laboratory professional after training is completed. Additionally, the framework holds behavioral anchors, which are measures that a manager/supervisor would use to assess the individual's competencies.

The goal of the framework is a competent laboratory workforce doing comparable work as part of the Integrated Food Safety System.

The majority of work accomplished to date has focused on laboratory professionals at the Entry Level and Mid Level, shown in the image below.

						Human and Animal Food Laboratory Professionals Curriculum Framework - April, 2020															
Certificates & Certifications																					
Mid (Program Specific)	Animal Food	Animal Health	Dairy	Environmental	Human Food	Shellfish	Audit	Hazardous Material Shipping	Infectious Agent Shipping	Waste Management	Animal Food Safety	Animal Health	Food Safety	Environmental Conditions	Milk and Dairy Product Safety	Shellfish					
	Gas Chromatography - Mass Spectrometry (GCMS)			Inductively Coupled Plasma Mass Spectrometry (ICPMS)		Liquid Chromatography - Mass Spectrometry (LCMS)		National Laboratory Networks Methods			Radiological			Advanced Technologies			National Laboratory Networks Methods				
Mid	Advanced Communication Skills		Advanced Quality Techniques		Basic Leadership Skills		Critical Thinking		Evidentiary Integrity		Human and Animal Food Incident Response		Laboratory Networks and Partnerships		Legal Proceedings		Method Evaluation and Selection		Root Cause Analysis		
Entry (Program Specific)	Certificates & Certifications																				
	Animal Food			Biosafety Level 3				Dairy Regulatory Programs				Select Agents				Shellfish Regulatory Programs					
	Basic Chromatography		Basic Separation / Extraction Techniques			Basic Mass Spectrometry		Basic Spectroscopy		Environmental Monitoring and Investigations		Aseptic Techniques		Basic Foodborne Pathogens		Environmental Conditions		Microbiological Testing			
Entry	Accreditation/ Certification	Basic Communication Skills	Basic Laboratory Math	Basic Laboratory Statistics	Basic Laboratory Techniques	Chain of Custody	Ethics	Incident Command System (ICS)	Integrated Food Safety System (IFSS)	Laboratory Information Management system (LIMS)	Laboratory Sampling	Method Resources	Public Health (One Health) Approach	Quality Management Systems	Regulatory Programs	Regulatory Sampling	Safety	Waste Management			

Each "box" or "brick" within the framework represents a content or subject area in which the laboratory professional must possess competence. The content or subject areas are either *core* (applying to all laboratory professionals) or *program-specific* (applying to laboratory professionals specializing in either Chemistry, Microbiology, or Specialized Laboratories).

Framework development workshops are held periodically, either at the APHL headquarters in Silver Spring, MD or via interactive webinar. The SMEs participating in these workshops represent a range of stakeholders including but not limited to APHL, AFDO, AAFCO, FDA, and state laboratories.

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