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Title: Guidance on Acceptable Courses to Satisfy the Requirement for 8 Semester Hours of Microbiology (or related courses) to Serve as EMLAP Technical Manager		

Note regarding 2010 Guidance:

Changes were made to the acceptable coursework to qualify as an EMLAP Technical Manager (TM). These changes were enacted since the coursework requirement in the AIHA-LAP, LLC Policies as of 2009 was reduced to eight (8) credits. Courses initiated after January 1, 2008, that were listed on the previous guidance document (dated 03/7/2007), will be accepted if completed no later than December 31, 2010.

Introduction

The requirements for qualifying for technical manager for the AIHA-LAP, LLC Environmental Microbiology Laboratory Accreditation Program (EMLAP) are set forth in Policy Module 2D, Section 2D.4.1 (in addition to those in Module 2A). In order to qualify for Technical Manager (2.D.4.1.1), the candidate must have a Microbiology or life science degree (with eight (8) semester hours in microbiology), with three (3) years relevant non-academic work experience. A minimum of two (2) years experience must be in microbiological analyses within the scope of accreditation. The remaining one (1) year can be from other laboratory analytical procedures. All non-academic work experience and coursework must be documented in the employee’s training and personnel files. This document is intended as guidance to interpreting what will be deemed acceptable coursework for meeting these requirements.

The following is a working definition of a “life science degree”


A related life science degree is any degree that relates to several branches of science, that may include, but is not restricted to, biology, medicine, ecology, microbiology, mycology, plant pathology, and botany that deal with examination of living organisms and their organization, life processes, and relationships to each other and their environment. This is also called bioscience.

The following is guidance on what would or would not be relevant coursework for the Microbiology coursework requirement:

The litmus test for relevance is whether a majority of the time in the course focused on learning to handle microbes, on identifying microbes, on examining microbes, or studying the basic biology/ecology of microbes. Microbes are defined as those organisms small enough (or smaller) to require the use of a compound microscope for routine work, but may be defined broadly in terms of biological groups. For EMLAP purposes, a core of the coursework should be related to biodeteriogens or pathogens.

Certainly any courses such as General Microbiology and Introductory Mycology are relevant. However, Life Science courses such as General Botany, Pest Control, Plant Morphology, and Cytology are not considered relevant microbiology courses. Also, some courses such as molecular biology may use microbes peripherally, but do not focus on the microbes, and thus would not meet the “litmus test” given above. It is not possible though to prepare a definitive list of every course from every college, so there will be some courses for which individual decisions (judgment courses) will be needed, either from Site Assessors, TAP Reviewers or AIHA-LAP, LLC Staff. Some specific examples of courses are listed below as guidance in addition to the descriptions provided above.

This is a proposed guidance philosophy on judgment courses. Many plant pathology courses focus on microbes and **should be acceptable** (but not nematology, plant disease control or entomology). Likewise, microbial ecology, microbial physiology or any other courses that emphasize working directly with or understanding **different types** of microbes may be acceptable. Conversely, courses such as genetics, molecular biology and/or

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biochemistry that **only use microbes indirectly**, (i.e. single species used as an experimental tool rather than the focus of the course), **should not be acceptable**.

Course (Please note that course names may vary at different institutions.)	Acceptability
General Microbiology	YES
Advanced Microbiology	YES
Virology	NO
Mycology	YES
Advanced Mycology (including courses on a particular group of fungi, such as “Ascomycetes”, “Lower fungi”, “Plant Pathogenic Fungi”	YES
Fungal Physiology	YES
Clinical / Medical Microbiology	YES
Clinical / Medical Bacteriology	YES
Clinical / Medical Parasitology	NO
Clinical / Medical Mycology	YES
Clinical / Medical Virology	NO
Intro’ to Plant Pathology	YES
Protistology	NO
Wood Microbiology	YES
Post-Harvest Decay	YES
Lichenology	YES
Microbial Physiology	YES
Microbial Ecology	YES
Phycology	NO
Diseases of ...(field crops, fruits, vegetable crops, forest trees, etc.)	YES – these usually focus on a variety of fungal pathogens (and their life cycles and disease ecology) common to the crop
Special Topics / Research Hours	Only if related to microbes, and would need a brief (2 or 3 sentence) description of the nature of the project



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Course (Please note that course names may vary at different institutions.)	Acceptability
Biological Technique	Only if a description is provided, and the course relates in part to microbiology, and there is a solid “core” of microbiology coursework, then this course could round out the requirement.
Public Health Microbiology	See comments for Biological Technique
Marine Biology	NO
Control of Plant Diseases	Only if a description of the course is provided that illustrates the microbial aspect rather than pesticide, crop cultural, and genetic resistance aspects.
Nematology	NO
Entomology	NO
General Botany	NO
Plant Morphology	NO
Plant Physiology	NO
Histology	NO
Plant Tissue Culture	NO
Cytology	NO
Agricultural Science	NO
Plant Taxonomy	NO
Field Botany	NO
Zoology	NO