

The NAACLS Board of Directors is requesting public comment for the new proposed Medical Laboratory Microbiologist unique standards. All comments must be sent by email to [RDeCaluwe@naacsls.org](mailto:RDeCaluwe@naacsls.org) by the end of business on **December 11<sup>th</sup>, 2022**.

## Proposed Standards – MLM Standards

### **MEDICAL LABORATORY MICROBIOLOGIST**

#### **Unique Standards Medical Laboratory Microbiologist (MLM)**

##### **PREAMBLE**

###### Objectives

The purpose of these Standards and the Description of the Profession is to establish, maintain, and promote standards of quality for educational programs in the clinical laboratory sciences and to provide recognition for educational programs which meet or exceed the minimum standards outlined in this document.

The Standards are to be used for the development and evaluation of medical laboratory science programs. Paper reviewers and site visit teams assist in the evaluation of the program's compliance with the Standards. Lists of accredited programs are published for the information of students, employers, and the public.

The ability to relate to people, a capacity for calm and reasoned judgment and a demonstration of commitment to the patient are essential qualities. Communications skills extend to consultative interactions with members of the healthcare team, external relations, customer service and patient education.

Medical Laboratory Microbiologists (MLMs) demonstrate ethical and moral attitudes and principles that are necessary for gaining and maintaining the confidence of patients, professional associates, and the community.

##### **Description of Entry Level Competencies of the Medical Laboratory Microbiologist (MLM)**

At entry level, the medical laboratory microbiologist (MLM) will possess the entry level competencies to perform the full range of clinical laboratory tests in clinical Microbiology, Molecular Diagnostics, Laboratory Management and Operations, and other emerging diagnostics, and will play a role in the development and evaluation of test systems and interpretive algorithms.

The medical laboratory microbiologist (MLM) will have diverse responsibilities in areas of analysis and clinical decision-making, regulatory compliance with applicable regulations, education, and quality assurance/performance improvement wherever laboratory testing is researched, developed or performed.

At entry level, the medical laboratory microbiologist (MLM) will have the following basic knowledge and skills in:

- A. Application of safety and governmental regulations and standards as applied to medical microbiology;
- B. Principles and practices of professional conduct and the significance of continuing professional development;
- C. Communications sufficient to serve the needs of patients, the public and members of the health care team;
- D. Principles and practices of administration and supervision as applied to medical microbiology;
- E. Educational methodologies and terminology sufficient to train/educate users and providers of laboratory services;
- F. Principles and practices of clinical study design, implementation and dissemination of results.

#### **I. MLM Program Administration**

##### **A. Program Director**

The program must have a NAACLS approved medical laboratory professional serving as program director who meets the following qualifications and executes all required responsibilities.

##### **1. Qualifications**

- a. has an earned master's or doctoral degree;
- b. holds ASCP-BOC or ASCP<sup>i</sup>-BOC generalist certification as a Medical Laboratory Scientist/Medical Technologist or categorical (discipline specific) ASCP-BOC certification in Microbiology.
- c. has three years of teaching experience in medical microbiology.
- d. has knowledge of education methods and administration as well as current NAACLS accreditation procedures and certification procedures.

##### **2. Responsibilities**

The program director must:

- a. be responsible for the organization, administration, instruction,

evaluation, continuous quality improvement, curriculum planning and development, directing other program faculty/staff, and general effectiveness of the program;

- b. provide evidence that s/he participates in the budget preparation process;
- c. engage in a minimum of 36 hours of documented continuing professional development every 3 years;
- d. be responsible for maintaining NAACLS accreditation of the program;
- e. have regular and consistent contact with students, faculty, and program personnel

3. Faculty Appointments

The program director must have a faculty or clinical appointment at the sponsoring institution.

Program Directors who have been approved as a program director of a NAACLS accredited MLS program prior to October 1, 2013 remain eligible as a program director.

B. Site Program Coordinator (required for multi-location programs only; assigned to each participating site)

1. Qualifications

The site program coordinator must:

- a. have an academic degree appropriate to the program level;
- b. hold the same level certification required of a program director;
- c. have at least one year of experience in medical microbiology education.

2. Responsibilities

The site program coordinator, when required, is responsible for:

- a. coordinating teaching and clinical education;
- b. evaluating program effectiveness;
- c. maintaining appropriate communications with the program

director.

C. Faculty

1. Didactic Instructor Appointments

The program must have qualified faculty/instructors who hold appointments within the educational program (e.g., certified professionals in their respective or related fields). The program must ensure and document ongoing professional development of the program faculty/instructors.

a. Qualifications

Faculty/instructors designated by the program must:

- i. demonstrate adequate knowledge and proficiency in their content areas;
- ii. demonstrate the ability to teach effectively at the appropriate level.

b. Responsibilities

The responsibilities of the faculty/instructors must include:

- i. participation in teaching courses;
- ii. evaluation of student achievement;
- iii. development of curriculum, policy and procedures;
- iv. assessment of program outcomes.

2. Clinical Liaison

At least one clinical liaison, who is employed by the clinical site, must be designated at each clinical site affiliated with the program to coordinate clinical experiences for students.

a. Qualifications

The clinical liaison must:

- i. Be a medical laboratory professional who demonstrates the ability to effectively coordinate clinical experiences of the students;
- ii. demonstrate knowledge of the program discipline;

iii. have at least one year experience as a medical laboratory professional.

b. Responsibilities

The clinical liaison must be responsible for:

- i. coordinating clinical instruction at the site;
- ii. maintaining effective communication with the program director or designee.

D. Advisory Committee

There must be an advisory committee composed of individuals from the community of interest (e.g., practicing professionals, academic professionals, scientific consultants, administrators, pathologists and other physicians, public member) who have knowledge of clinical laboratory science education.

1. Responsibilities

The advisory committee of the program shall have input into the program/curriculum to maintain current relevancy and effectiveness.

## **VIII. Medical Laboratory Microbiologist Curriculum Requirements**

A. Instructional Areas

- 1. Prerequisite courses in biological sciences, chemistry and mathematics that provide the foundation for course work required in the medical microbiology program.
- 2. The curriculum must address pre-analytical, analytical and post-analytical components of microbiology laboratory services. This includes principles and methodologies, performance of assays, problem-solving, troubleshooting techniques, interpretation and evaluation of clinical procedures and results, statistical approaches to data evaluation, principles and practices of quality assurance/quality improvement, and continuous assessment of laboratory services for all major areas practiced in the contemporary clinical microbiology laboratory.

The program curriculum must include the following scientific content:

- a) Immunology/Serology
- b) Clinical Bacteriology
- c) Antimicrobial Susceptibility Testing and Resistance
- d) Molecular Microbiology
- e) Mycology
- f) Parasitology

- g) Mycobacteriology and *Nocardia*
- h) Virology
- i) Microbiology Laboratory Operations and Management

3. Application of safety and governmental regulations and standards as applied to the medical microbiology laboratory.
4. Principles and practices of professional conduct and the significance continuing professional development.
5. Communications sufficient to serve the needs of patients, the public and members of the health care team.
6. Principles and practices of administration and supervision as applied to Medical Microbiology.
7. Educational methodologies and terminology sufficient to train/educate users and providers of microbiology laboratory services.
8. Principles and practices of clinical study design, implementation and dissemination of results.

B. Learning Experiences

1. Learning experiences (courses, practica, other required activities) must be properly sequenced and include necessary content and activities to enable students to achieve entry level competencies in each major discipline as listed in Standard VIII.A.2.
2. After demonstrating competency, students, with qualified supervision, may be permitted to perform procedures.

C. Evaluations

Evaluation systems must relate to course content and support program competencies. If there is evidence that competencies are not adequately achieved (through feedback mechanisms as described in Standard II.B) then course objectives will be examined in detail to assure that the objectives are behavioral, include all domains and relate directly to the evaluations used.

1. These evaluation systems must be employed frequently enough to provide students and faculty with timely indications of the students' academic standing and progress.
2. The evaluation systems must serve as a reliable indicator of the effectiveness of instruction and course design.

This request for public comment has been placed in the NAACLS News and on the NAACLS website, and comments may be sent by email to

[RDeCaluwe@naaccls.org](mailto:RDeCaluwe@naaccls.org). **Due to the informal nature of LISTSERV communications, comments or discussion posted on the CLS Educators LISTSERV will not be presented**

to or considered by the NAACLS Board of Directors.. NAACLS must receive all comments before the end of the business day **December 11<sup>th</sup>, 2022**. The comments will then be reviewed and brought before the Board of Directors at the April 2023 Board Meeting.