DCLS Standard IV.A.d.

Current	Proposed
IV. Students A. Publications and Disclosures 1. The following must be defined, published, and readily available to prospective and enrolled students: a. program mission statement b. program goals and graduate competencies c. program accreditation status including the name, address and contact information for NAACLS d. results of the program outcome measures as identified in Standard II.B e. list of affiliated facilities	IV. Students A. Publications and Disclosures 1. The following must be defined, published, and readily available to prospective and enrolled students: a. program mission statement b. program goals and graduate competencies c. program accreditation status including the name, address and contact information for NAACLS d. designation of degree at the advanced practice level e. results of the program outcome measures as identified in Standard II.B f. list of affiliated facilities

Rationale:

The DRC recommends this standard to clarify to prospective students that the DCLS degree is an advanced practice degree.

Standard VII.A Program Director for HT, HTL and Path A

Current	Proposed
VII. HT 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 The program director must have: a. A bachelor's degree or higher. b. An ASCP BOC or ASCP^{i} BOC certification as a histotechnologist or histotechnician. i. If the program director does not hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist or histotechnician, a qualified professional who does hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist or histotechnician must hold appointment as education coordinator. c. Three years teaching experience. d. Knowledge of education methods and administration as well as current NAACLS accreditation procedures and certification procedures. e. (for international programs only) If the program director does not hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist or histotechnician, a qualified professional who does hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist or histotechnician must hold appointment as an accreditation liaison.	**VII. HT 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 The program director must have: a. A bachelor's degree or higher. b. An ASCP BOC or ASCP^{i} BOC certification as a histotechnologist or histotechnician. i. If the program director does not hold any of these certifications, an education coordinator is required. c. Three years teaching experience. d. Knowledge of education methods and administration as well as current NAACLS accreditation procedures and certification procedures. e. (for international programs only) If the program director does not hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist or histotechnician, a qualified professional who does hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist or histotechnician must hold appointment as an accreditation liaison.
VII. HTL 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 The program director must have: a. An earned master's or doctoral degree.	**VII. HTL 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 The program director must have: a. An earned master's or doctoral degree.

b. An ASCP BOC or ASCP^{i} BOC certification as a histotechnologist.
    i. If the program director does not hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist, a qualified professional who does hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist must hold appointment as education coordinator.
c. Three years of teaching experience.
d. Knowledge of education methods and administration as well as current NAACLS accreditation procedures and certification procedures.
e. (for international programs only) If the program director does not hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist, a qualified professional who does hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist must hold appointment as an accreditation liaison.

VII. Path A 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

   The program director must:

   a. Be a graduate of a NAACLS accredited (AAPA approved prior to 1995) pathologists' assistant educational program with an advanced degree (master's or doctoral), currently hold ASCP BOC certification as a Pathologists' Assistant, or a board-certified pathologist.
      i. If the program director is a pathologist, there must be an ASCP certified, NAACLS Accredited program educated pathologists' assistant employed as the educational coordinator/clinical coordinator.
   b. Have a faculty appointment in the sponsoring institution and meet all requirements specified by the institution responsible for providing the didactic portion of the educational program and maintaining the overall operation of the program.
   c. Have practical knowledge of educational methods and administration as well as current NAACLS accreditation and professional certification procedures, demonstrates adequate knowledge and proficiency in their content areas,

b. An ASCP BOC or ASCP^{i} BOC certification as a histotechnologist.
    i. If the program director does not hold any of these certifications, an education coordinator is required.
c. Three years of teaching experience.
d. Knowledge of education methods and administration as well as current NAACLS accreditation procedures and certification procedures.
e. (for international programs only) If the program director does not hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist, a qualified professional who does hold ASCP BOC or ASCP^{i} BOC certification as a histotechnologist must hold appointment as an accreditation liaison.

VII. Path A 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

   The program director must:

   a. Be a graduate of a NAACLS accredited (AAPA approved prior to 1995) pathologists' assistant educational program with an advanced degree (master's or doctoral), currently hold ASCP BOC certification as a Pathologists' Assistant, or a board-certified pathologist.
      i. If the program director is a pathologist, there must be an educational coordinator who meets the above requirements for a pathologists' assistant program director.
   b. Have a faculty appointment in the sponsoring institution and meet all requirements specified by the institution responsible for providing the didactic portion of the educational program and maintaining the overall operation of the program.
   c. Have practical knowledge of educational methods and

demonstrates the ability to teach effectively at the appropriate level. d. (for international programs only) If the program director does not hold ASCP BOC certification as a Pathologists' Assistant, or a board-certified pathologist, a qualified professional who does hold ASCP BOC certification as a Pathologists' Assistant, or a board-certified pathologist must hold appointment as an accreditation liaison.	administration as well as current NAACLS accreditation and professional certification procedures, demonstrates adequate knowledge and proficiency in their content areas, demonstrates the ability to teach effectively at the appropriate level. d. (for international programs only) If the program director does not hold ASCP BOC certification as a Pathologists' Assistant, or a board-certified pathologist, a qualified professional who does hold ASCP BOC certification as a Pathologists' Assistant, or a board-certified pathologist must hold appointment as an accreditation liaison.

Rationale:

Ensure consistent use of standard language across all disciplines, while still preserving the unique requirements of each.

Standard VII.F. Education Coordinator for Path A

Current	Proposed
F. Education Coordinator (when required) 1. Qualifications The education coordinator, when required, must be a medical laboratory professional who: a. Has maintained 60 credit hours (completed within a three-year time period) of CME related to pathology. b. Holds ASCP BOC U.S. Certification as a Pathologists' Assistant. c. Has knowledge of NAACLS accreditation and current certification procedures. 2. Responsibilities The education coordinator/clinical coordinator, when required, must provide supervision and coordination of the instructional faculty in the academic and clinical phases of the education program.	**F. Education Coordinator (when required)** 1. Qualifications The education coordinator, when required, must be a medical laboratory professional who: ~~d. Has maintained 60 credit hours (completed within a three-year time period) of CME related to pathology.~~ a. Holds ASCP BOC U.S. Certification as a Pathologists' Assistant. b. Has knowledge of NAACLS accreditation and current certification procedures. 2. Responsibilities The education coordinator~~/clinical coordinator~~, when required, a. Must provide supervision and coordination of the instructional faculty in the academic and clinical phases of the education program. b. Has maintained 60 credit hours (completed within a three-year time period) of CME related to pathology.

Rationale:

Moving the CME requirement for Path A education coordinator from qualifications to responsibilities for consistency with other standard language. Staff consulted with the PathA Educators on RCAP to confirm this change would not affect the requirements, but will align with the rest of the standard language regarding professional development/CME. Also, RCAP Path A educators both provided insight that education coordinator/clinical coordinator are one and the same, so it is not needed to list both. A recommendation was made to remove the clinical coordinator reference in the PathA Standards.

Standards VII.A,E and F for MLM

Current	Proposed
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 The program director must have: a. An earned master's or doctoral degree. b. An ASCP BOC or ASCP^{i} BOC generalist certification as a medical laboratory scientist or categorical ASCP BOC certification in Microbiology. i. If the program director does not hold ASCP BOC or ASCP^{i} BOC certification as a generalist certification as a medical laboratory scientist or categorical ASCP BOC certification in Microbiology, a qualified professional who does hold ASCP BOC or ASCP^{i} BOC generalist certification as a medical laboratory scientist must hold appointment as education coordinator. c. Three years of teaching experience in medical microbiology or related area d. Knowledge of education methods and administration as well as current NAACLS accreditation procedures and certification procedures. e. (for international programs only) If the program director does not hold ASCP BOC or ASCP^{i} BOC generalist certification as a medical laboratory scientist or categorical ASCP BOC certification in Microbiology, a qualified professional who does hold ASCP BOC or ASCP^{i} BOC generalist certification as a medical laboratory scientist or categorical ASCP BOC certification in Microbiology must hold appointment as an accreditation liaison.	**A. MLM Program Director Qualifications** 1. Qualifications The program director must have: a. An earned master's or doctoral degree. b. An ASCP BOC or ASCP^{i} BOC certification as a medical laboratory scientist, specialist in Microbiology (SM) or technologist in Microbiology. i. If the program director does not hold any of these certifications, an education coordinator is required. c. Three years of teaching experience in medical microbiology or related area d. Knowledge of education methods and administration as well as current NAACLS accreditation procedures and certification procedures. e. (for international programs only) If the program director does not hold an ASCP BOC or ASCP^{i} BOC certification as a medical laboratory scientist, specialist in Microbiology (SM) or technologist in Microbiology, a qualified professional who does hold an ASCP BOC or ASCP^{i} BOC certification as a medical laboratory scientist, specialist in Microbiology (SM) or technologist in Microbiology must hold appointment as an accreditation liaison.
E. Accreditation Liaison (when required, for international programs only) 1. Qualifications The accreditation liaison, when required, must be a medical laboratory professional who:	**E. Accreditation Liaison (when required, for international programs only)** 1. Qualifications The accreditation liaison, when required, must be a medical laboratory professional who:

a. Has knowledge of NAACLS accreditation. b. Has at least a master's degree and three years of experience in the program discipline. c. Holds ASCP BOC or ASCP[i] BOC generalist certification as a medical laboratory scientist or categorical ASCP BOC certification in Microbiology. 2. Responsibilities The accreditation liaison, when required, must: a. Provide guidance and assistance in NAACLS accreditation requirements, policies and procedures. b. Provide input into the curriculum and continuous program assessment and improvement. c. Have regular contact, program director, faculty and program personnel. **F. Education Coordinator (when required)** 1. Qualifications The education coordinator, when required, must be a medical laboratory professional who: a. Has at least a bachelor's degree and three years of experience in the program discipline. b. Holds ASCP BOC or ASCP[i] BOC generalist certification as a medical laboratory scientist. c. Has knowledge of NAACLS accreditation and current certification procedures.	a. Has knowledge of NAACLS accreditation. b. Has at least a master's degree and three years of experience in the program discipline. c. Holds an ASCP BOC or ASCP[i] BOC certification as a medical laboratory scientist, specialist in Microbiology (SM) or technologist in Microbiology. 2. Responsibilities The accreditation liaison, when required, must: a. Provide guidance and assistance in NAACLS accreditation requirements, policies and procedures. b. Provide input into the curriculum and continuous program assessment and improvement. c. Have regular contact, program director, faculty and program personnel. **F. Education Coordinator (when required)** 1. Qualifications The education coordinator, when required, must be a medical laboratory professional who: a. Has at least a bachelor's degree and three years of experience in the program discipline. b. Holds an ASCP BOC or ASCP[i] BOC certification as a medical laboratory scientist, specialist in Microbiology (SM) or technologist in Microbiology. c. Has knowledge of NAACLS accreditation and current certification procedures.

Rationale:

The Future and Emerging Professions (FEP) Task Force realized that the Program Director, Education Coordinator and Accreditation Liaison can have ASCP[i] BOC certification not only as a medical laboratory scientist, but also ASCP[i] BOC certification as a technologist in microbiology or as a specialist in microbiology.

Standard VIII: Revisions for All Disciplines Excluding DCLS

Current	Proposed
BMS Curriculum Requirements **A. Instructional Areas** 1. Prerequisite courses in biological sciences, chemistry and mathematics that provide the foundation for course work required in the professional program. 2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline. 3. The curriculum must address pre-analytical, analytical and post-analytical components of laboratory services. This includes collecting, processing, and analyzing biological specimens and other substances, 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, foundations of laboratory operations and management and continuous assessment of laboratory services for all major areas practiced in the contemporary field and level of practice. 4. The program curriculum must also include: a. The application of safety and governmental regulations and standards as applied to the field of practice. 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 and/or professional community. d. Principles and practices of administration and supervision as applied to the field of practice. e. Sufficient educational methodologies and terminology to train/educate users and providers of laboratory services. f. Principles and practices of clinical study design, implementation and dissemination of results.	**BMS Prerequisite and Curriculum Requirements** **A. Prerequisite Requirements** Content in biological sciences, chemistry and mathematics that provide the foundation for course work required in the professional program. **B. Curriculum Requirements** 1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline. 2. Application of safety and governmental regulations and standards as applied to the field of practice. 3. Principles and practices of professional conduct and the significance of continuing professional development. 4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community. 5. Principles and practices of administration and supervision as applied to the field of practice. 6. Educational methodologies and terminology to train/educate users and providers of laboratory services. 7. Principles and practices of clinical study design, implementation and dissemination of results. 8. Interprofessional education and collaborative practice. 9. Pre-analytical, analytical and post-analytical components of laboratory services, including: a. Collecting, processing, and analyzing biological specimens and other substances. b. Principles, methodologies, and performance of assays. c. Problem-solving and troubleshooting techniques. d. Interpretation and evaluation of clinical procedures and results. e. Statistical approaches to data evaluation. f. Principles and practices of quality assurance/quality improvement. g. Foundations of laboratory operations and management and continuous assessment of laboratory services for all

g. Interprofessional education and collaborative practice.

CG Curriculum Requirements

A. Instructional Areas

1. The program must identify prerequisite content in biological sciences, chemistry and mathematics that provides the foundation for course work required in the laboratory science program.
2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
3. The program curriculum must include the following scientific content:
    a. Specimen preparation and processing.
    b. Molecular cytogenetic testing.
    c. Chromosome analysis and imaging.
    d. Laboratory operations including safety, professional standards and conduct, quality control, guidelines and regulations.
4. The program curriculum must also include:
    a. Principles of interpersonal and interdisciplinary communication and team-building skills and the significance of continuing professional development.
    b. Principles and practices of administration and supervision.
    c. Sufficient educational methodologies and terminology to train/educate users and providers of laboratory services.
    d. Principles and practices of clinical study design, implementation and dissemination of results.
    e. Interprofessional education and collaborative practice.

DMS Curriculum Requirements

A. Instructional Areas

1. The program must identify prerequisite courses in biological sciences including genetics, chemistry and mathematics that

major areas practiced in the contemporary field and level of practice.

CG Prerequisite and Curriculum Requirements

A. Prerequisite Requirements

Content in biological sciences, chemistry and mathematics that provide the foundation for course work required in the professional program.

B. Curriculum Requirements

1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
2. Application of safety and governmental regulations and standards as applied to cytogenetics.
3. Principles and practices of professional conduct and the significance of continuing professional development.
4. Principles of interpersonal and interdisciplinary communication and team-building skills.
5. Principles and practices of administration and supervision.
6. Educational methodologies and terminology sufficient to train/educate users and providers of laboratory services.
7. Principles and practices of clinical study design, implementation and dissemination of results.
8. Interprofessional education and collaborative practice.
9. Pre-analytical, analytical and post-analytical components of laboratory services, including:
    a. specimen preparation and processing
    b. molecular cytogenetic testing
    c. chromosome analysis and imaging
    d. laboratory operations

DMS Prerequisite and Curriculum Requirements

A. Prerequisite Requirements

Content in biological sciences including genetics, chemistry and mathematics that provide the foundation for course work required in the laboratory science program.

provide the foundation for course work required in the laboratory science program.
2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
3. The curriculum must address pre-analytical, analytical and post-analytical components of diagnostic molecular laboratory services covering diagnostic molecular tests used to detect or diagnose acquired (infectious and noninfectious) diseases and genetic predisposition or disorders. 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.
4. The program curriculum must include the following scientific content:
    a. Organic and/or biochemistry, genetics, cell biology, microbiology, immunology, and diagnostic molecular biology.
    b. Principles, methodologies, and applications of molecular microbiology (infectious diseases), molecular pathology (hematology/oncology), and molecular genetics.
    c. Techniques of molecular science must include current techniques in each of separation and detection, amplification, and sequence analysis, for example sanger sequencing.
    d. Clinical significance of laboratory procedures in diagnosis and treatment.
5. The program curriculum must also include:
    a. The application of safety and governmental regulations and standards as applied to diagnostic molecular science.
    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.

B. Curriculum Requirements

1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
2. Application of safety and governmental regulations and standards as applied to diagnostic molecular science.
3. Principles and practices of professional conduct and the significance of continuing professional development.
4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community.
5. Principles and practices of administration, supervision, and quality management as applied to diagnostic molecular science.
6. Educational methodologies and terminology to train/educate users and providers of laboratory services.
7. Principles and practices of applied study design, implementation and dissemination of results.
8. Interprofessional education and collaborative practice.
9. Pre-analytical, analytical and post-analytical components of diagnostic molecular laboratory services, including:
    a. Principles, methodologies, and performance of diagnostic molecular tests used to detect or diagnose acquired (infectious and noninfectious) diseases and genetic predisposition or disorders.
    b. Problem-solving and troubleshooting techniques.
    c. Interpretation and evaluation of clinical procedures and results.
    d. Statistical approaches to data evaluation.
    e. Principles and practices of quality assurance/quality improvement.
    f. Continuous assessment of laboratory services.
10. Scientific content in:
    a. Organic and/or biochemistry, genetics, cell biology, microbiology, immunology, and diagnostic molecular biology.
    b. Principles, methodologies, and applications of molecular microbiology (infectious diseases), molecular pathology (hematology/oncology), and molecular genetics.
    c. Current molecular techniques, including methodologies for sample separation, amplification, and sequencing analyses.

d. Principles and practices of administration, supervision, and quality management as applied to diagnostic molecular science. e. Sufficient educational methodologies and terminology to train/educate users and providers of laboratory services. f. Principles and practices of applied study design, implementation and dissemination of results. g. Interprofessional education and collaborative practice.	d. Clinical significance of laboratory procedures in diagnosis and treatment.
HT Curriculum Requirements **A. Instructional Areas** 1. The program must identify prerequisite content in biological sciences, chemistry and mathematics that provides the foundation for course work required in the laboratory science program. 2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline. 3. Applications of histology, immunohistochemistry, enzyme histochemistry, cytology specimen preparation, electron microscopy and light microscopy. This includes principles and methodologies, problem-solving, and troubleshooting, for all major areas practiced in the contemporary histopathology laboratory. 4. Concepts and principles of laboratory operations must include: a. accessioning b. gross examination c. frozen sectioning d. fixation e. processing f. embedding/microtomy g. staining principles, procedures, reagents and quality control h. laboratory operations including safety, instrumentation, quality control, laboratory mathematics 5. Identifying tissue structures and staining characteristics. 6. The program curriculum must also include: a. The application of safety and governmental regulations and standards as applied to histotechnology.	**HT Prerequisite and Curriculum Requirements** **A. Prerequisite Requirements** Content in biological sciences including biological sciences, chemistry and mathematics that provide the foundation for course work required in the laboratory science program. **B. Curriculum Requirements** 1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline. 2. Application of safety and governmental regulations and standards as applied to histotechnology. 3. Principles and practices of professional conduct and the significance of continuing professional development. 4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community. 5. Interprofessional and collaborative practice. 6. Identification of tissue structures and staining characteristics. 7. Pre-analytical and analytical components of laboratory operations, including: a. accessioning b. gross examination c. frozen sectioning d. fixation e. processing f. embedding/microtomy g. staining principles, procedures, reagents and quality control h. safety, instrumentation, quality control, laboratory mathematics

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 safety as applied to histotechnology.
e. Interprofessional and collaborative practice.

HTL Curriculum Requirements

A. Instructional Areas

1. The program must identify prerequisite content in biological sciences, chemistry and mathematics that provides the foundation for course work required in the laboratory science program.
2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
3. Applications of histology, immunohistochemistry, enzyme histochemistry, cytology specimen preparation, electron microscopy, light microscopy, management, education, and regulations. This includes principles and methodologies, performance of tests, problem-solving, troubleshooting, techniques, interpretation of procedures and results of laboratory services for all major areas practiced in the contemporary histopathology laboratory.
4. Concepts and principles of laboratory operations must include:
    a. accessioning
    b. gross examination
    c. frozen sectioning
    d. fixation
    e. processing, to include chemistry principles and theories
    f. embedding/microtomy
    g. staining principles, procedures, reagents and quality control
    h. laboratory operations including safety, instrumentation, quality control, and regulations
8. Applications of histology, immunohistochemistry, enzyme histochemistry, cytology specimen preparation, electron microscopy and light microscopy to include principles and methodologies, problem-solving, and troubleshooting, for all major areas practiced in the contemporary histopathology laboratory.

HTL Prerequisite and Curriculum Requirements

A. Prerequisite Requirements

Content in biological sciences, chemistry and mathematics provide the foundation for course work required in the laboratory science program.

B. Curriculum Requirements

1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
2. Application of safety and governmental regulations and standards as applied to histotechnology.
3. Principles and practices of professional conduct and the significance of continuing professional development.
4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community.
5. Principles and practices of administration, supervision, and safety as applied to histotechnology.
6. Educational methodologies and terminology to train/educate users and providers of laboratory services.
7. Interprofessional education and collaborative practice.
8. Identification of tissue structures, cell components, and their staining characteristics, relating each to physiological functions.
9. Pre-analytical, analytical and post-analytical components of histotechnology laboratory operations, including:
    a. accessioning
    b. gross examination
    c. frozen sectioning
    d. fixation
    e. processing, to include chemistry principles and theories

5. Identification of tissue structures, cell components, and their staining characteristics and relating them to physiological functions.
6. The program curriculum must also include:
    a. The application of safety and governmental regulations and standards as applied to histotechnology.
    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, supervision, and safety as applied to histotechnology.
    e. Sufficient education techniques and terminology to train/educate users and providers of laboratory services.
    f. Interprofessional education and collaborative practice.

MLA Curriculum Requirements

A. Instructional Areas

1. The program curriculum must include instruction and experiences in the following:
    a. 100 hours of clinical experiences.
    b. Core module competencies must be completed.
    c. Instruction in a variety of skills including: blood collection, preparation/reconstitution of reagents, standards and controls, perform tests at the medical laboratory assistant level and follow established quality control protocols.
    d. Curriculum in any module(s) beyond the core module must meet the minimum required standards as stated for the core module. These modules include, but are not limited to: chemistry, donor room, hematology, immunology, microbiology and/or urinalysis.
2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
3. The program curriculum must also include:
    f. embedding/microtomy
    g. staining principles, procedures, reagents and quality control
    h. safety, instrumentation, quality control, and regulations
10. Applications of histology, immunohistochemistry, enzyme histochemistry, cytology specimen preparation, electron microscopy, light microscopy, management, education, and regulations. This includes principles and methodologies, performance of tests, problem-solving, troubleshooting techniques, interpretation of procedures and results of laboratory services for all major areas practiced in the contemporary histopathology laboratory.

MLA Prerequisite and Curriculum Requirements

A. Prerequisite Requirements

Meet medical laboratory assistant program entry requirements.

B. Curriculum Requirements

1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
2. Application of safety and governmental regulations compliance.
3. Principles and practices of professional conduct, working with diverse stakeholders, and the significance of continuing professional development.
4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community.
5. Interprofessional education and collaborative practice.
6. A minimum of 100 hours of clinical experiences.
7. Pre-analytical components of laboratory services, including:
    a. Principles and practices of patient registration.
    b. Principles and practices of specimen collection, preparation and processing.

a. The application of safety and governmental regulations compliance.
b. Principles and practices of professional conduct, working with diverse stakeholders, and the significance of continuing professional development.
c. Communicating effectively with a range of audiences; sufficient to serve the needs of patients, the public, and members of the health care team.
d. Interprofessional education and collaborative practice.

MLM Curriculum Requirements

A. Instructional Areas

1. The program must identify prerequisite courses in biological sciences, chemistry and mathematics that provide the foundation for course work required in the medical microbiology program.
2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
3. 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.
4. 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

c. Providing support for clinical testing and basic laboratory operations.
d. Principles and practices of performing waived point of care tests.
e. Preparation or reconstitution of reagents, standards and quality control materials.
f. Performance of tests at the medical laboratory assistant level.
g. Adherence to established quality control protocols.

MLM Prerequisite and Curriculum Requirements

A. Prerequisite Requirements

Content in biological sciences, chemistry and mathematics that provide the foundation for course work required in the professional program.

B. Curriculum Requirements

1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
2. Application of safety and governmental regulations and standards as applied to the medical microbiology laboratory.
3. Principles and practices of professional conduct and the significance of continuing professional development.
4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community.
5. Principles and practices of administration and supervision as applied to medical microbiology.
6. Educational methodologies and terminology sufficient to train/educate users and providers of microbiology laboratory services.
7. Principles and practices of clinical study design, implementation and dissemination of results.
8. Interprofessional education and collaborative practice.
9. Pre-analytical, analytical and post-analytical components of microbiology laboratory services, including:
    a. Principles, methodologies, and performance of assays.

h. virology
i. microbiology laboratory operations and management

5. The program curriculum must also include:
   a. The application of safety and governmental regulations and standards as applied to the medical microbiology laboratory.
   b. Principles and practices of professional conduct, working with diverse stakeholders, and the significance continuing professional development.
   c. Communicating effectively with a range of audiences; 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 microbiology laboratory services.
   f. Principles and practices of clinical study design, implementation and dissemination of results.
   g. Interprofessional education and collaborative practice.

MLS Curriculum Requirements

A. Instructional Areas

1. The program must identify prerequisite courses in biological sciences, chemistry and mathematics that provide the foundation for course work required in the laboratory science program.
2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
3. The curriculum must address pre-analytical, analytical, and post-analytical components of laboratory services. This includes principles and methodologies including collection, processing, 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 in the following current medical laboratory scientific content areas:
   b. Problem-solving, troubleshooting techniques.
   c. Interpretation and evaluation of clinical procedures and results.
   d. Statistical approaches to data evaluation.
   e. Principles and practices of quality assurance/quality improvement.
   f. Continuous assessment of laboratory services for all major areas practiced in the contemporary clinical microbiology laboratory.
10. Scientific content in:
    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

MLS Prerequisite and Curriculum Requirements

A. Prerequisite Requirements

Courses in biological sciences, chemistry and mathematics that provide the foundation for course work required in the laboratory science program.

B. Curriculum Requirements

1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
2. Application of safety and governmental regulations and standards as applied to medical laboratory science.
3. Principles and practices of professional conduct and the significance of continuing professional development.
4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community.
5. Principles and practices of administration and supervision as applied to medical laboratory science.

a. clinical chemistry
b. hematology/hemostasis
c. immunology
d. immunohematology/transfusion medicine
e. microbiology
f. urine and body fluid analysis
g. laboratory operations and management

4. The program curriculum must also include:
   a. The application of safety and governmental regulations and standards as applied to medical laboratory science.
   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 laboratory science.
   e. Educational methodologies and terminology sufficient to train/educate users and providers of laboratory services.
   f. Principles and practices of clinical and research study design, implementation, and dissemination of results.
   g. Interprofessional education and collaborative practice.

MLT Curriculum Requirements

A. Instructional Areas

1. The program must identify prerequisite content in biological sciences, chemistry and mathematics that provides the foundation for course work required in the laboratory science program.
2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
3. The curriculum must address pre-analytical, analytical and post-analytical components of laboratory services. This includes principles and methodologies including collection, processing, performance of assays, problem-solving, troubleshooting techniques, significance of clinical procedures
6. Educational methodologies and terminology sufficient to train/educate users and providers of laboratory services.
7. Principles and practices of clinical and research study design, implementation, and dissemination of results.
8. Interprofessional education and collaborative practice.
9. Pre-analytical, analytical and post-analytical components of laboratory services, including:
   a. Principles and methodologies including collection, processing, and performance of assays.
   b. Problem-solving, troubleshooting techniques.
   c. Interpretation and evaluation of clinical procedures and results.
   d. Statistical approaches to data evaluation.
   e. Principles and practices of quality assurance/quality improvement.
   f. Continuous assessment of laboratory services in the following current medical laboratory scientific content areas:
      i. clinical chemistry
      ii. hematology/hemostasis
      iii. immunology
      iv. immunohematology/transfusion medicine
      v. microbiology
      vi. urine and body fluid analysis
      vii. laboratory operations and management

MLT Prerequisite and Curriculum Requirements

A. Prerequisite Requirements

Content in biological sciences, chemistry and mathematics that provides the foundation for course work required in the laboratory science program.

B. Curriculum Requirements

1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
2. Application of safety and governmental regulations compliance.
3. Principles and practices of professional conduct and the significance of continuing professional development.

and results, principles and practices of quality assessment, for all major areas practiced in the contemporary clinical laboratory. The program curriculum must include the following medical laboratory scientific content:
    a. clinical chemistry
    b. hematology/hemostasis
    c. immunology
    d. immunohematology/transfusion medicine
    e. microbiology
    f. urine and body fluid analysis
    g. laboratory operations
4. The program curriculum must also include:
    a. The application of safety and governmental regulations compliance.
    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. Interprofessional education and collaborative practice.

Path A Curriculum Requirements

A. Instructional Areas

1. The program must identify prerequisite courses in biology, chemistry and mathematics that provide the foundation for course work required in the pathologists' assistant program.
2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
3. The curriculum must provide a comprehensive knowledge of practices in Anatomic Pathology encompassing surgical and autopsy pathology. This includes principles and methodologies, performance of procedures, correlation of clinical information and gross pathology with proper technique, problem solving, troubleshooting techniques, principles and practices of quality assurance/quality improvement, and laboratory management.
4. The program curriculum must include the following scientific and academic content:
4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community.
5. Interprofessional education and collaborative practice.
6. Pre-analytical, analytical and post-analytical components of laboratory services, including:
    a. Principles and methodologies including collection, processing, performance of assays.
    b. Problem-solving, troubleshooting techniques.
    c. Significance of clinical procedures and results.
    d. Principles and practices of quality assessment, for all major areas practiced in the contemporary clinical laboratory.
7. Scientific Content in:
    a. clinical chemistry
    b. hematology/hemostasis
    c. immunology
    d. immunohematology/transfusion medicine
    e. microbiology
    f. urine and body fluid analysis
    g. laboratory operations

Path A Prerequisite and Curriculum Requirements

A. Prerequisite Requirements

Content in biology, chemistry and mathematics that provides the foundation for course work required in the pathologists' assistant program.

B. Curriculum Requirements

1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
2. Application of laboratory safety governmental regulations and standards as applied to anatomic pathology.
3. Principles and practices of professional conduct and the significance of continuing professional development.
4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community.
5. Principles and practices of administration and supervision as applied to anatomic pathology.

a. anatomy and basic microanatomy
b. human physiology
c. general and systemic human pathology
d. anatomic pathology
e. surgical pathology techniques
    i. adult
    ii. pediatric
f. autopsy techniques
g. medical autopsy techniques
    i. adult
    ii. pediatric
h. forensic autopsy techniques
    i. adult
    ii. pediatric
i. toxicology collection techniques
j. histological methods and techniques
k. concepts of immunohistochemistry
l. concepts of molecular diagnostics
m. microbiology/immunology
n. clinical pathology
o. embryology
p. laboratory safety
q. laboratory information systems
r. laboratory management
s. medical ethics
t. medical terminology
u. biomedical photography

5. The program curriculum must also include:
    a. The application of laboratory safety governmental regulations and standards as applied to anatomic pathology.
    b. Principles and practices of professional conduct.
    c. Principles of interpersonal and interdisciplinary communication and team-building skills.
    d. Principles and practices of administration and supervision as applied to clinical laboratory science.
    e. Educational methodologies.
    f. Interprofessional education and collaborative practice.
6. Educational methodologies and terminology sufficient to train/educate users and providers of laboratory services.
7. Principles and practices of clinical study design, implementation and dissemination of results.
8. Interprofessional education and collaborative practice.
9. Pre-analytical, analytical and post-analytical components of anatomic pathology encompassing surgical and autopsy pathology to include:
    a. Principles, methodologies and performance of procedures.
    b. Correlation of clinical information and gross pathology with proper technique.
    c. Problem-solving and troubleshooting techniques.
    d. Principles and practices of quality assurance/quality improvement.
    e. Laboratory management.
10. Scientific and academic content in:
    a. anatomy and basic microanatomy
    b. human physiology
    c. general and systemic human pathology
    d. anatomic pathology
    e. surgical pathology techniques
        i. adult
        ii. pediatric
    f. autopsy techniques
    g. medical autopsy techniques
        i. adult
        ii. pediatric
    h. forensic autopsy techniques
        i. adult
        ii. pediatric
    i. toxicology collection techniques
    j. histological methods and techniques
    k. concepts of immunohistochemistry
    l. concepts of molecular diagnostics
    m. microbiology/immunology
    n. clinical pathology
    o. embryology
    p. laboratory safety
    q. laboratory information systems
    r. laboratory management
    s. medical ethics

PBT Curriculum Requirements

A. Instructional Areas

The program curriculum must include instruction and experiences in the following:

1. A variety of collection techniques including evacuated tube collection devices, syringe collection, and capillary/dermal puncture methods.
2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
3. The curriculum must include a minimum of 100 hours of clinical experiences and a minimum of 100 successful unaided collections.
4. The application of safety and governmental regulations and standards as applied to phlebotomy.
5. Principles and practices of professional conduct.
6. Principles of interpersonal and interdisciplinary communication and team building skills.
7. Interprofessional education and collaborative practice.

PHM Curriculum Requirements

A. Instructional Areas

1. Prerequisite courses in biological sciences, chemistry and mathematics that provide the foundation for course work required in the public health microbiology program.
2. The program must deliver instruction utilizing cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
3. The curriculum must address pre-analytical, analytical and post-analytical components of public health microbiology laboratory services. This includes principles and
    t. medical terminology
    u. biomedical photography

PBT Prerequisite and Curriculum Requirements

A. Prerequisite Requirements

Meet phlebotomy program entry requirements.

B. Curriculum Requirements

1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
2. Application of safety and governmental regulations and standards as applied to phlebotomy.
3. Principles and practices of professional conduct and the significance of continuing professional development.
4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community.
5. Interprofessional education and collaborative practice.
6. A minimum of 100 hours of clinical experiences.
7. A minimum of 100 successful unaided collections.
8. Pre-analytical components of laboratory services, including principles and practices of a variety of collection techniques including:
    a. evacuated tube collection devices
    b. syringe collection
    c. capillary/dermal puncture methods

PHM Prerequisite and Curriculum Requirements

A. Prerequisite Requirements

Content in biological sciences, chemistry and mathematics that provide the foundation for course work required in the public health microbiology program.

B. Curriculum Requirements

1. Cognitive, psychomotor, and affective learning domains that enable the student to meet entry-level competencies of the program discipline.
2. Application of safety and governmental regulations and standards as applied to the public health microbiology laboratory.

methodologies, performance of assays, problem-solving, troubleshooting techniques, interpretation and evaluation of laboratory procedures and results, statistical approaches to data evaluation, principles and practices of quality assurance/quality improvement, and continuous assessment of public health microbiology services for all major areas practiced in the contemporary public health microbiology laboratory.

4. The program curriculum must include the following scientific content:
    a. anaerobic bacteriology
    b. food and water bacteriology
    c. gram positive and negative bacteriology
    d. molecular microbiology
    e. mycology
    f. parasitology
    g. mycobacteriology
    h. serology
    i. sexually transmitted infections
    j. virology
    k. public health microbiology
    l. laboratory operations and management.
5. The program curriculum must also include:
    a. The application of safety and governmental regulations and standards as applied to the public health microbiology laboratory.
    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 the public health microbiology laboratory.
    e. Educational methodologies and terminology sufficient to train/educate users and providers of public health microbiology laboratory services.
    f. Principles and practices of research design, implementation and dissemination of results.
    g. Interprofessional education and collaborative practice.

3. Principles and practices of professional conduct and the significance of continuing professional development.
4. Principles of interpersonal and interdisciplinary communication skills sufficient to serve the needs of patients, the public and members of the health care team and/or professional community.
5. Principles and practices of administration and supervision as applied to the public health microbiology laboratory.
6. Educational methodologies and terminology sufficient to train/educate users and providers of public health microbiology laboratory services.
7. Principles and practices of research design, implementation and dissemination of results.
8. Interprofessional education and collaborative practice.
9. Pre-analytical, analytical and post-analytical components of public health microbiology laboratory services, including:
    a. Principles, methodologies, and performance of assays.
    b. Problem-solving, troubleshooting techniques.
    c. Interpretation and evaluation of laboratory procedures and results.
    d. Statistical approaches to data evaluation.
    e. Principles and practices of quality assurance/quality improvement.
    f. Continuous assessment of public health microbiology services for all major areas practiced in the contemporary public health microbiology laboratory.
10. Scientific content in:
    a. anaerobic bacteriology
    b. food and water bacteriology
    c. gram positive and negative bacteriology
    d. molecular microbiology
    e. mycology
    f. parasitology
    g. mycobacteriology
    h. serology
    i. sexually transmitted infections
    j. virology
    k. public health microbiology
    l. laboratory operations and management

Rationale:

Standard VIII lacked consistency in formatting and content organization. The review committee chairs and both committees reviewed and aligned the content's organization, but still unique to each discipline. Format changes include:

- Splitting "instructional areas" into prereq and curriculum requirements.
- Assigning all elements of Pre-analytical, analytical and post-analytical components into individual sub-standards
- Shifting

DCLS Standard VIII.A.4.a

Current	Proposed
VIII. Curriculum Requirements A. Instructional Areas 4. The program curriculum must include principles and practices of: a. patient-centered care to provide and coordinate care as related to laboratory services including disease prevention, wellness promotion, and public health initiatives	VIII. Curriculum Requirements A. Instructional Areas 4. The program curriculum must include principles and practices of: a. patient-centered care focusing on consulting and coordinating ~~to provide and coordinate care as related to~~ laboratory services including disease prevention, wellness promotion, and public health initiatives

Rationale:

NAACLS was notified of confusion that other healthcare providers feel this Standard language permits a DCLS to practice medicine without a license. Since this is not the intent of the DCLS Standard, wording was changed to reflect the actual curriculum requirements and role of the DCLS .