

**GENERAL DESCRIPTION OF CLASS**

The MEDICAL LABORATORY TECHNOLOGIST performs a variety of standard and complex chemical, microscopic, immunological, bacteriological, hematological, serological, virological, cytological, toxicological, and microbiological tests and analyses at a professional level, to provide data used in the diagnosis, evaluation and treatment of human and animal illnesses and diseases. Tests performed by employees at this level are often characterized by a lack of well defined procedures for detecting errors and are often performed without completely defined instructions, requiring employee to use a high degree of technical judgment and decision making to determine the most appropriate method for performing test. The Medical Laboratory Technologist provides technical interpretation of test results to physicians, veterinarians, or other professional health care personnel.

**DISTINGUISHING FEATURES**

This is a single classification and not currently part of a series of classes.

**DUTIES AND RESPONSIBILITIES**

- 1.Laboratory Testing.** Typical tasks: collects specimens for testing and checks for proper labeling (this may include collecting appropriate specimen for testing from patients); assesses quality and appropriateness of specimen with regard to test requested; assigns accession number to specimen and requisition slip; prepares specimen for analysis by diluting, filtrating, staining, or centrifuging; prepares necessary equipment and organizes supplies and reagents; runs quality control samples with known values to determine if test system is within acceptable limits; performs chemical, microbiological, immunological, serological, bacteriological, hematological, toxicological, microbiological, virological, and microscopic tests using a variety of both standard and complicated laboratory instruments and equipment; when necessary, performs calculations in order to achieve test results; evaluates tests for accuracy (tests are often characterized by a lack of well-defined procedures for detecting errors, which requires correlation of test results with results of other tests in order to determine accuracy); determines clinical significance of test results and notifies doctor immediately of abnormal test results or problems; enters test results into computer and reports results on requisition sheet; obtains computer printout of completed work to determine if all test values were entered correctly and all assigned work was completed; plots test control data onto graphs; interprets test results to physicians and others when requested; responds to inquiries regarding questions concerning test results.
- 2.Materials Preparation.** Typical tasks: weighs out chemicals and prepares reagents and other media in advance of time needed; reconstitutes materials used for quality control; performs quality control checks on all newly prepared reagents and media.
- 3.Equipment Quality Control and Maintenance.** Typical tasks: calibrates laboratory equipment on a regular basis; runs quality control checks on calibrated equipment by checking test results against known standards to determine accuracy of results; cleans and makes minor repairs to equipment such as lubricating fittings, cleaning electrodes, flushing out lines and tubing and replacing worn out tubing, fittings, batteries and fuses; records all actions taken in a maintenance record book.

**4.Training.** Typical tasks: explains laboratory test procedures, principles and theories to students, trainees and staff; demonstrates instrument set-up, calibration and maintenance; evaluates results of their practice tests.

**5.Miscellaneous.** Typical tasks: attends continuing education seminars and reads related journals, periodicals and magazines to keep up-to-date on the most current laboratory procedures and technology; may test and implement new procedures; may attend continuing education courses as required by some accrediting agencies.

## **RELATIONSHIPS WITH OTHERS**

Employees in this class are in contact, in person and by telephone, on a regular basis with physicians and nurses to report test results, inquire about additional tests, notify regarding unsatisfactory specimens, and respond to questions regarding laboratory tests or results. Employees in this class have occasional in-person contact with students and trainees to train them in medical laboratory procedures and with stockroom personnel to order supplies.

## **SUPERVISION RECEIVED**

Employees in this class work under the general supervision of a medical laboratory supervisor or other professional superior. Special projects and assignments to specific laboratory areas are assigned by supervisor. Daily work assignments are received from requisition slips where doctors have requested specific tests. Employees at this level work independently with patient reports being reviewed for clerical accuracy and conformance to policies, and quality control reports being reviewed to assure media, reagents and equipment functioning are within acceptable limits.

The College of American Pathologists accreditation regulations, Nuclear Regulatory Commission regulations, National Committee of Clinical Laboratory standards, and State Health Division regulations set the standards for the types of laboratory tests that can be done and how they are to be performed. These standards are used as the basis for agency laboratory policies and procedures. Laboratory manuals show normal values for various tests, indicate what quality control checks to run, and outline procedures for performing the tests. Equipment manuals are used as guidelines in the operation, maintenance and troubleshooting of instruments and equipment.

## **GENERAL INFORMATION**

Positions in this class are primarily found in hospitals and health institutions. They require the willingness to work in the environment associated with the position's location and purpose.

## **KNOWLEDGE, SKILLS, AND ABILITIES (KSA)**

General knowledge of laboratory terminology, equipment, methods and techniques.

General knowledge of chemistry, biochemistry, biology, anatomy, physiology, immunology and mathematics.

General knowledge of the operation and maintenance of various standard and complex laboratory instruments and equipment.

General knowledge of clinical laboratory tests, their theory, how to perform them, and their related pathophysiology.  
 General knowledge of the techniques required for general laboratory safety and the proper handling of hazardous materials.  
 General knowledge of microbiology - mycology and parasitology.  
 General knowledge of laboratory quality assurance methods.  
 General knowledge of medical and legal risks.

Skill in performing a variety of laboratory tests using both standard and complex laboratory equipment.  
 Skill in reading and following scientific laboratory methods and complex instructions.  
 Skill in calibrating and maintaining laboratory equipment.  
 Skill in recognizing abnormal values of the test results.  
 Skill in oral communications.

Ability to organize and prioritize work.  
 Ability to learn new, complex procedures rapidly.  
 Ability to work efficiently and accurately with a minimum of supervision.  
 Ability to keep abreast of constantly changing laboratory methodology and technology.  
 Ability to determine accuracy of test results.  
 Ability to use computer for inputting information.  
 Ability to communicate professionally with all levels of health care staff.  
 Ability to adapt to changing technology and practice.  
 Ability to function as team member.  
 Ability to solve serologic problems accurately and rapidly.  
 Ability to work accurately and rapidly in an emergency.

### **SPECIAL QUALIFICATIONS**

Some positions in this class must satisfy Federal, State and/or accrediting agency requirements for training and experience.

**NOTE:** The KNOWLEDGE and SKILLS are required for initial consideration. ABILITIES may be required for initial consideration, at any time during the selection process, or during a trial service period as a final stage of the selection process. Some duties performed by positions in this class may require different KSA's. No attempt is made to describe every KSA required for **all** positions in this class. Additional KSA requirements will be explained on the recruiting announcement.

Adopted 1/90

Revised

Examples of work are typical of duties assigned to this class. No attempt is made to describe every duty performed by all positions in this class.