Medical Lab Tech (MEDT)

Courses

MEDT A101 Phlebotomy and Specimen Processing 5 Credits
Introduces concepts, procedures and equipment used in phlebotomy and specimen processing. Topics include: infection control, laboratory safety, specimen requisitioning, collection, handling and processing techniques, professionalism and laboratory workflow.
Special Note: Prepares students for phlebotomy practicum.
Registration Restrictions: Departmental approval
Prerequisites: WRTG A090 with a minimum grade of C.

MEDT A105 Microbiology for Clinical Assistants 3 Credits
Develops skills in the selection, inoculation and incubation of appropriate media for culturing clinical microbiology specimens.
Registration Restrictions: Departmental approval.
Prerequisites: MEDT A110 with a minimum grade of C.

MEDT A106 Waived Testing 4 Credits
Introduces quality control, instrumentation and methodologies for waived testing in hematology, chemistry, urinalysis and microbiology. Includes laboratory measurements, calculations and microscopy. Prepares students for clinical assistant practicum.
Registration Restrictions: Departmental approval.
Prerequisites: MEDT A101 with a minimum grade of C.

MEDT A110 Specimen Processing 3 Credits
Introduces common procedures used to safely and accurately collect, separate and transport specimens prior to testing. Clerical and technical responsibilities of the clinical assistant are introduced, including accessioning, determining specimen acceptability and problem solving. Lab information system processes, quality assurance and compliance within the laboratory will be included.
Registration Restrictions: Departmental approval. Prerequisite may be waived with documented experience in phlebotomy as assessed by faculty.
Prerequisites: MEDT A101 with a minimum grade of C.

MEDT A132 Introduction to Laboratory Medicine 3 Credits
Introduces the basic terms, concepts, procedures and equipment used in a clinical laboratory. Topics include professional ethics, regulatory agencies, laboratory safety, phlebotomy, specimen processing, measurements and calculations, laboratory information systems, and quality assessment.
Registration Restrictions: Departmental approval
May Be Stacked With: MEDT A133
Prerequisites: BIOL A111 with a minimum grade of C and (CHEM A103 with a minimum grade of C and CHEM A103L with a minimum grade of C) or (CHEM A105 with a minimum grade of C and CHEM A105L with a minimum grade of C) and (CIS A105 with a minimum grade of C or CIS A110 with a minimum grade of C).

MEDT A133 Basic Techniques in Laboratory Medicine 1 Credit
Introduces the basic terms, concepts, procedures and equipment used in a clinical laboratory. Topics include laboratory measurements and calculations, laboratory information systems, and quality assessment.
Registration Restrictions: Departmental approval. MEDT A101 prerequisite may be waived with documented experience in phlebotomy as assessed by faculty.
May Be Stacked With: MEDT A132
Prerequisites: BIOL A111 with a minimum grade of C and (CHEM A103 with a minimum grade of C and CHEM A103L with a minimum grade of C) or (CHEM A105 with a minimum grade of C and CHEM A105L with a minimum grade of C) and (CIS A105 with a minimum grade of C or CIS A110 with a minimum grade of C) or (CHEM A104 with a minimum grade of C or CHEM A321 with a minimum grade of C) and (CIS A105 with a minimum grade of C or CIS A110 with a minimum grade of C) or MEDT A101 with a minimum grade of C.

MEDT A195A Phlebotomy Practicum 3 Credits
Applies principles of safety, specimen requisitioning, collection, handling and processing techniques to patient testing in a clinical laboratory. Prepares students for entry-level employment as a phlebotomist.
Registration Restrictions: Departmental approval.
Prerequisites: MEDT A101 with a minimum grade of C or MEDT A132 with a minimum grade of C and COHI A201 with a minimum grade of C.

MEDT A195B Clinical Assistant Practicum 4 Credits
Applies principles of safety, quality control, waived testing and culture set-up to patient testing in a clinical laboratory. Prepares student for entry-level employment as a clinical assistant.
Registration Restrictions: Departmental approval.
Prerequisites: MEDT A105 with a minimum grade of C and MEDT A106 with a minimum grade of C.

MEDT A202 Clinical Chemistry 6 Credits
Develops skills in performing chemical analysis of blood and other body fluids. Discusses and practices specific testing procedures for different organ systems and analytes. Presents correlation of laboratory results with clinical findings. Emphasizes quality assessment.
Registration Restrictions: Departmental approval.
Prerequisites: BIOL A112 with a minimum grade of C and (CHEM A104 with a minimum grade of C or CHEM A321 with a minimum grade of C) and (MEDT A132 with a minimum grade of C or MEDT A133 with a minimum grade of C).

MEDT A203 Clinical Microbiology 6 Credits
Emphasizes culture media, biochemical tests, immunoassays, and staining techniques used in the identification and susceptibility testing for microorganisms of medical importance to humans. Includes bacteriology and an introduction to parasitology, mycology and virology.
Registration Restrictions: Departmental approval.
Prerequisites: BIOL A112 with a minimum grade of C and (CHEM A104 with a minimum grade of C or CHEM A321 with a minimum grade of C) and (MEDT A132 with a minimum grade of C or MEDT A133 with a minimum grade of C).

Medical Lab Tech (MEDT)
**MEDT A204 Hematology and Coagulation 6 Credits**
Emphasizes the theory and practice of manual and automated procedures in hematology and coagulation and the relationship of these procedures to the diagnosis of disease.

**Registration Restrictions:** Departmental approval.

**Prerequisites:** BIOL A112 with a minimum grade of C and (CHEM A104 with a minimum grade of C or CHEM A321 with a minimum grade of C) and (MEDT A132 with a minimum grade of C or MEDT A133 with a minimum grade of C).

**MEDT A206 Immunology and Blood Banking 6 Credits**
Introduces concepts of the immune system and functions of cellular and soluble components. Discusses principles of antigen-antibody based tests and their use in the diagnosis of infectious diseases and blood banking procedures. Introduces the theory of antigen-antibody reactions as it relates to blood grouping and typing, antibody detection and compatibility testing. Discusses blood donor screening and component preparations, storage and transportation.

**Registration Restrictions:** Departmental approval.

**Prerequisites:** BIOL A112 with a minimum grade of C and (CHEM A104 with a minimum grade of C or CHEM A321 with a minimum grade of C) and (MEDT A132 with a minimum grade of C or MEDT A133 with a minimum grade of C).

**MEDT A208 Urine and Body Fluid Analysis 3 Credits**
Examines the physical, chemical and microscopic properties of urine and other body fluids. Correlates selected chemical and microscopic constituents of urine and other body fluids with various disease states.

**Registration Restrictions:** Departmental approval.

**Prerequisites:** BIOL A112 with a minimum grade of C and (CHEM A104 with a minimum grade of C or CHEM A321 with a minimum grade of C) and (MEDT A132 with a minimum grade of C or MEDT A133 with a minimum grade of C).

**MEDT A250 Cultural Diversity in Health Care 1 Credit**
Challenges students to examine their cultural biases and to recognize the importance of cultural awareness in providing exceptional medical care. Examines community, personal and family relationships through the lens of cross-cultural health and healing practices. Introduces health care consumers from various cultural backgrounds.

**MEDT A301 Clinical Molecular Biology 4 Credits**
Examines the practice of molecular biology and its applications in the clinical laboratory. Topics include human genetics; isolation, amplification, discrimination and detection techniques for nucleic acids; and the design and operation of a molecular diagnostic laboratory.

**Registration Restrictions:** Departmental approval.

**Prerequisites:** MEDT A203 with a minimum grade of C and MEDT A204 with a minimum grade of C.

**MEDT A302 Clinical Laboratory Education and Management 4 Credits**
Introduces educational and management principles and tools applicable to laboratory medicine and allied health science professions. Provides basic management skills necessary to function in a technologically dynamic environment. Topics include the educational process and teaching methods and basic managerial subjects including human resources and financial management. The course is designed for students with an educational or working background in the clinical laboratory or other health care field.

**Registration Restrictions:** Completion of GER Tier 1 (basic college-level skills) courses, junior standing and departmental approval.

**Attributes:** UAA Integrative Capstone GER.

**MEDT A303 Advanced Clinical Microbiology 6 Credits**
Examines microorganisms of medical importance to humans. Includes unusual pathogenic and anaerobic bacteriology, mycology, parasitology, and virology with emphasis on identification, susceptibility testing, and epidemiology.

**Registration Restrictions:** Departmental approval. Prerequisite may be substituted with equivalent upper division microbiology course approved by faculty.

**Prerequisites:** MEDT A203 with a minimum grade of C.

**MEDT A306 Advanced Immunology and Blood Banking 2 Credits**
Emphasizes advanced concepts in immunology and blood banking to solve complex problems. Topics include current transfusion practices, recent advances in transfusion medicine, human leukocyte antigen (HLA) testing, autoimmune disorders and cell identification using flow cytometry. Prepares students to perform and interpret tests done during the serology and blood bank rotations of their clinical practicum (MEDT A495).

**Registration Restrictions:** Departmental approval

**Prerequisites:** MEDT A206 with a minimum grade of C.

**Corequisites:** MEDT A306L.

**MEDT A395 Medical Laboratory Technology Practicum 12 Credits**
Applies knowledge and skills acquired in medical laboratory science (MEDT) courses to laboratory testing at a clinical facility. Supervised by UAA faculty and clinical laboratory personnel.

**Registration Restrictions:** Departmental approval

**Prerequisites:** MEDT A202 with a minimum grade of C and MEDT A203 with a minimum grade of C and MEDT A204 with a minimum grade of C and MEDT A206 with a minimum grade of C and MEDT A208 with a minimum grade of C.

**MEDT A401 Introduction to Research 2 Credits**
Applies research and presentation methods to current topics in medical laboratory science.

**Registration Restrictions:** Departmental approval

**Prerequisites:** CIS A110 with a minimum grade of C and (STAT A252 with a minimum grade of C or STAT A253 with a minimum grade of C).
MEDT A402 Medical Laboratory Science Honors: Quality Assessment Project 3 Credits
Applies basic research techniques and quality assessment principles to address a quality care issue.

**Registration Restrictions:** MLS major and departmental approval
**Prerequisites:** MEDT A302 with a minimum grade of C and MEDT A401 with a minimum grade of C or concurrent enrollment.

MEDT A495 Medical Laboratory Science Practicum 11 Credits
Integrates knowledge and applies skills acquired in medical laboratory science (MEDT) courses to laboratory testing at a clinical facility. Students are supervised by UAA faculty and clinical laboratory personnel.

**Registration Restrictions:** Departmental approval
**Prerequisites:** MEDT A202 with a minimum grade of C and MEDT A204 with a minimum grade of C and MEDT A206 with a minimum grade of C and MEDT A208 with a minimum grade of C and MEDT A301 with a minimum grade of C and MEDT A302 with a minimum grade of C and MEDT A303 with a minimum grade of C.

MEDT A601 Diagnostic Flow Cytometry 3 Credits
Examines technical and managerial information about flow cytometry and its applications in the clinical laboratory.

**Registration Restrictions:** Bachelor of Science in Medical Technology and departmental approval.
**Prerequisites:** MEDT A204 with a minimum grade of C and MEDT A206 with a minimum grade of C.