

Medical Lab Technology (MEDT)

Courses

MEDT A132 Phlebotomy and Specimen Processing Techniques **2 Credits**

Introduces the basic terms, concepts, procedures and equipment used in phlebotomy. Includes professional ethics and laws.

Registration Restrictions: Departmental approval

Prerequisites: Accuplacer-Reading Comp with a score of 120.

MEDT A132L Phlebotomy and Specimen Processing Techniques Lab **2 Credits**

Develops skills in safely performing phlebotomy and specimen processing techniques.

Registration Restrictions: Departmental approval

Prerequisites: MEDT A132 with a minimum grade of C or concurrent enrollment.

MEDT A133 Basic Techniques in Laboratory Medicine **2 Credits**

Introduces the basic terms, concepts, procedures and equipment used in a clinical laboratory. Includes regulatory agencies, laboratory measurements and calculations, laboratory information systems, and quality assessment.

Prerequisites: MEDT A132 with a minimum grade of C or concurrent enrollment and (BIOL A112 with a minimum grade of C and BIOL A112L with a minimum grade of C) and CHEM A104 with a minimum grade of C and CHEM A104L with a minimum grade of C.

MEDT A134 Immunology and Serology **3 Credits**

Introduces concepts of the immune system, including development, function and failures. Discusses principles of antigen-antibody reactions and serologic procedures performed in the clinical laboratory to diagnose diseases.

Prerequisites: MEDT A132 with a minimum grade of C or concurrent enrollment and BIOL A112 with a minimum grade of C and BIOL A112L with a minimum grade of C and CHEM A104 with a minimum grade of C and CHEM A104L with a minimum grade of C.

MEDT A195A Phlebotomy Practicum **4 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 A132 with a minimum grade of C and MEDT A132L with a minimum grade of C.

MEDT A195C Phlebotomy Practicum **6 Credits**

Provides clinical practicum in area hospitals/facilities for phlebotomy. Applies didactic theories of phlebotomy techniques. Prepares students for certification exam.

Special Note: This course is for distance phlebotomy students who have not taken the in-person course and practiced phlebotomy skills.

Registration Restrictions: Departmental approval

Prerequisites: MEDT A132 with a minimum grade of C.

MEDT A202 Clinical Chemistry **4 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.

Prerequisites: MEDT A132 with a minimum grade of C and MEDT A132L with a minimum grade of C and MEDT A133 with a minimum grade of C and MEDT A134 with a minimum grade of C.

Corequisites: MEDT A202L.

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.

Prerequisites: MEDT A132 with a minimum grade of C and MEDT A132L with a minimum grade of C and MEDT A133 with a minimum grade of C and MEDT A134 with a minimum grade of C.

Corequisites: MEDT A203L.

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.

Prerequisites: MEDT A132 with a minimum grade of C and MEDT A132L with a minimum grade of C and MEDT A133 with a minimum grade of C and MEDT A134 with a minimum grade of C.

Corequisites: MEDT A204L.

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.

Prerequisites: MEDT A132 with a minimum grade of C and MEDT A132L with a minimum grade of C and MEDT A133 with a minimum grade of C and MEDT A134 with a minimum grade of C.

Corequisites: MEDT A208L.

MEDT A211 Blood Banking **4 Credits**

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.

Prerequisites: MEDT A132 with a minimum grade of C and MEDT A132L with a minimum grade of C and MEDT A133 with a minimum grade of C and MEDT A134 with a minimum grade of C.

Corequisites: MEDT A211L.

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 Molecular and Emerging Diagnostics 3 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. Introduces emerging diagnostics and their applications in the clinical laboratory.

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.

Prerequisites: MEDT A203 with a minimum grade of C.

Corequisites: MEDT A303L.

MEDT A306 Advanced Immunology and Blood Banking 3 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 A211 with a minimum grade of C.

Corequisites: MEDT A306L.

MEDT A307 Clinical Correlations 2 Credits

Applies knowledge, critical thinking and problem solving skills to case studies in all of the laboratory disciplines. Emphasizes clinical interpretation and correlation at an advanced level.

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 A208 with a minimum grade of C and MEDT A211 with a minimum grade of C.

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.

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 A208 with a minimum grade of C and MEDT A211 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.

Prerequisites: (STAT A200 with a minimum grade of C or STAT A253 with a minimum grade of C) and (WRTG A212 with a minimum grade of C or WRTG A213 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 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 and MEDT A306 with a minimum grade of C and MEDT A307 with a minimum grade of C.