# Medical Lab Tech (MEDT)

## Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Corequisites</th>
<th>Registration Restrictions</th>
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<tbody>
<tr>
<td>MEDT A132</td>
<td>Phlebotomy and Specimen Processing Techniques</td>
<td>2</td>
<td>MEDT A132L: Phlebotomy and Specimen Processing Techniques Lab 2 Credits</td>
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<td></td>
<td>Introduces the basic terms, concepts, procedures and equipment used in phlebotomy. Includes professional ethics and laws.</td>
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<td>MEDT A132L: Phlebotomy and Specimen Processing Techniques Lab 2 Credits</td>
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<td>MEDT A132L: Phlebotomy and Specimen Processing Techniques Lab 2 Credits</td>
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<td>Prerequisites: MEDT A132 with a minimum grade of C or concurrent enrollment</td>
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<td>MEDT A132L: Phlebotomy and Specimen Processing Techniques Lab 2 Credits</td>
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<tr>
<td>MEDT A133</td>
<td>Basic Techniques in Laboratory Medicine</td>
<td>2</td>
<td>MEDT A133: Basic Techniques in Laboratory Medicine 2 Credits</td>
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<td></td>
<td>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.</td>
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<td>MEDT A133: Basic Techniques in Laboratory Medicine 2 Credits</td>
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<td></td>
<td>Prerequisites: MEDT A132 with a minimum grade of C or concurrent enrollment</td>
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<td>MEDT A133: Basic Techniques in Laboratory Medicine 2 Credits</td>
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<tr>
<td>MEDT A134</td>
<td>Immunology and Serology</td>
<td>3</td>
<td>MEDT A134: Immunology and Serology 3 Credits</td>
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<td></td>
<td>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.</td>
<td></td>
<td>MEDT A134: Immunology and Serology 3 Credits</td>
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<td></td>
<td>Prerequisites: MEDT A132 with a minimum grade of C or concurrent enrollment and BIOL A112 with a minimum grade of C and CHEM A104 with a minimum grade of C and CHEM A104L with a minimum grade of C.</td>
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<td>MEDT A134: Immunology and Serology 3 Credits</td>
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<tr>
<td>MEDT A195A</td>
<td>Phlebotomy Practicum</td>
<td>4</td>
<td>MEDT A195A: Phlebotomy Practicum 4 Credits</td>
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<td></td>
<td>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.</td>
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<td>MEDT A195A: Phlebotomy Practicum 4 Credits</td>
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<td>Registration Restrictions: Departmental approval</td>
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<td>MEDT A195A: Phlebotomy Practicum 4 Credits</td>
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<td>Prerequisites: MEDT A132 with a minimum grade of C and MEDT A132L with a minimum grade of C or COHI A201 with a minimum grade of C.</td>
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<td>MEDT A195A: Phlebotomy Practicum 4 Credits</td>
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<tr>
<td>MEDT A195C</td>
<td>Phlebotomy Practicum</td>
<td>6</td>
<td>MEDT A195C: Phlebotomy Practicum 6 Credits</td>
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<td>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.</td>
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<td>MEDT A195C: Phlebotomy Practicum 6 Credits</td>
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<td>MEDT A195C: Phlebotomy Practicum 6 Credits</td>
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<td>Prerequisites: MEDT A132 with a minimum grade of C or COHI A201 with a minimum grade of C.</td>
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<td>MEDT A195C: Phlebotomy Practicum 6 Credits</td>
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<td>MEDT A202</td>
<td>Clinical Chemistry</td>
<td>4</td>
<td>MEDT A202: Clinical Chemistry 4 Credits</td>
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<td></td>
<td>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.</td>
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<td>MEDT A202: Clinical Chemistry 4 Credits</td>
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<td>Prerequisites: MEDT A132 with a minimum grade of C and MEDT A132L with a minimum grade of C and MEDT A134 with a minimum grade of C.</td>
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<td>MEDT A202: Clinical Chemistry 4 Credits</td>
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<td>Corequisites: MEDT A202L.</td>
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<td>MEDT A202: Clinical Chemistry 4 Credits</td>
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<tr>
<td>MEDT A203</td>
<td>Clinical Microbiology</td>
<td>6</td>
<td>MEDT A203: Clinical Microbiology 6 Credits</td>
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<td></td>
<td>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.</td>
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<td>MEDT A203: Clinical Microbiology 6 Credits</td>
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<td>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.</td>
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<td>MEDT A203: Clinical Microbiology 6 Credits</td>
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<td>MEDT A203: Clinical Microbiology 6 Credits</td>
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<td>MEDT A204</td>
<td>Hematology and Coagulation</td>
<td>6</td>
<td>MEDT A204: Hematology and Coagulation 6 Credits</td>
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<td></td>
<td>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.</td>
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<td>MEDT A204: Hematology and Coagulation 6 Credits</td>
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<td>MEDT A204: Hematology and Coagulation 6 Credits</td>
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<td>Corequisites: MEDT A204L.</td>
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<td>MEDT A204: Hematology and Coagulation 6 Credits</td>
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<td>MEDT A208</td>
<td>Urine and Body Fluid Analysis</td>
<td>3</td>
<td>MEDT A208: Urine and Body Fluid Analysis 3 Credits</td>
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<td></td>
<td>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.</td>
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<td>MEDT A208: Urine and Body Fluid Analysis 3 Credits</td>
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<td>Prerequisites: MEDT A132 with a minimum grade of C and MEDT A132L with a minimum grade of C and MEDT A134 with a minimum grade of C.</td>
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<td>MEDT A208: Urine and Body Fluid Analysis 3 Credits</td>
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<td>Corequisites: MEDT A208L.</td>
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<td>MEDT A208: Urine and Body Fluid Analysis 3 Credits</td>
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<tr>
<td>MEDT A211</td>
<td>Blood Banking</td>
<td>4</td>
<td>MEDT A211: Blood Banking 4 Credits</td>
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<td>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.</td>
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<td>MEDT A211: Blood Banking 4 Credits</td>
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<td>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.</td>
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<td>MEDT A211: Blood Banking 4 Credits</td>
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<td>Corequisites: MEDT A211L.</td>
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<td>MEDT A211: Blood Banking 4 Credits</td>
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</table>
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.

MEDT A496 Advanced Medical Laboratory Practicum 2 Credits
Prepares students to perform and interpret tests done during the
clinical rotations of their clinical practicum (MEDT A495).

Registration Restrictions: Departmental approval

Prerequisites: 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.

MEDT A497 Clinical Research Project 3 Credits
Prepares students to perform and interpret tests done during the
clinical rotations of their clinical practicum (MEDT A495).

Registration Restrictions: Departmental approval

Prerequisites: 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.

MEDT A498 Thesis 1-3 Credits
Prepares students to perform and interpret tests done during the
clinical rotations of their clinical practicum (MEDT A495).

Registration Restrictions: Departmental approval

Prerequisites: 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.

MEDT A499 Directed Study 1-3 Credits
Prepares students to perform and interpret tests done during the
clinical rotations of their clinical practicum (MEDT A495).

Registration Restrictions: Departmental approval

Prerequisites: 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. 