

Grade of "C" or better in MATH 115 or Accuplacer score of 104-120. Semester offered: Fall, Spring and Summer.[NM Common Course Number MATH 1213, Area II: Mathematics Core]

MATH-185 College Algebra 3 cr.
Instructs students in the knowledge of linear, piecewise, quadratic, polynomial, rational, inverse, exponential and logarithmic functions; function topics include finding the average rate of change, analyzing graphs, graphing using transformations, finding real and complex roots, and constructing functions to model real-world applications. Prerequisite: Grade of "C" or better in MATH 115 or Accuplacer score of 104-120. Semester offered: Fall, Spring and Summer. [NM Common Course Number MATH 1113, Area II: Mathematics Core]

MATH-187 Applications of Calculus 4 cr.
An introduction to the methods of differential and integral calculus. Polynomial, rational, exponential, and logarithmic functions are used. Applications involving optimization, related rates, growth and decay models, and marginality will be studied primarily in business context. Prerequisite: Grade of "C" or better in MATH 185. Semester Offered: Spring.

MATH-188 Calculus I (3+2p) 4 cr.
Instructs the student in the methods of differential calculus. Topics include elementary algebraic and transcendental functions, limits, continuity, differentiation and optimization. Mathematical software will be utilized throughout the course to expose students to computer algebra systems. Prerequisite: Grade of "C" or better in MATH 185 and MATH 180. Semester offered: Fall, Spring, and Summer.[NM Common Course Number MATH 1614, Area II: Mathematics Core]

MATH-189 Calculus II (3+2p) 4 cr.
A continuation of MATH 188; extending to topics in Techniques of Integration, Numerical Integration, Infinite Series Power Series, Maclaurin and Taylor Series and Taylor Polynomials. Prerequisite: Grade of "C" or better in MATH 188. Semester offered: Fall, Spring, and Summer..[NM Common Course Number MATH 1623, Area II: Mathematics Core]

MATH-215 Math for Elem and Middle School Teachers 3 cr.
A development of the properties, concepts, and logical reasoning of geometry. Prerequisite: Grade of "C" or better in MATH 121. Semester Offered: Fall and Spring.

MATH-231 Discrete Mathematics 3 cr.
An introductory course encompassing set theory, logic, induction and recursion, number theory, matrices, combinatorics, graph theory, trees, Boolean algebra, and models of computation. Prerequisite: Grade of "C" or better in MATH 188. Semester offered: Spring.

MATH-251 Statistics (3+2p) 4 cr.
Instructs the student in descriptive and inferential statistics, which includes sampling theory, experimental design, probability, probability distributions, confidence intervals, correlation and regression, tests of hypotheses (using the normal, student-t, chi-square, and F-distributions) and ANOVA. Lab time is provided for data analysis using statistical software. Prerequisites: Grade of "C" or better in MATH 115 or Accuplacer score: 104-120. Semester offered: Fall, Spring, and Summer.[NM Common Course Number MATH 2113, Area II: Mathematics Core]

MATH-268 Calculus III (3+2p) 4 cr.
Instructs the student in the techniques of multivariable calculus. Topics include partial differentiation, linear and quadratic approximations, optimization, multiple integration, vector fields, line and flux integrals, curl, divergence and the three fundamental theorems. Prerequisite: Grade of "C" or better in MATH 189. Semester offered: Fall and Spring.[NM Common Course Number MATH 2614, Area II: Mathematics Core]

MATH-275 Linear Algebra 3 cr.
An applications approach to introductory linear algebra. Covers systems of linear equations, matrices, linear independence, vector spaces, inner product spaces, linear transformations, eigenvalues, eigenvectors and applications. Prerequisite: Grade of "C" or better in MATH 189. Semester Offered: On Demand.

MATH-282 Differential Equations 4 cr.
In-depth introduction to ordinary differential equations. Topics include existence, and uniqueness, first and second order techniques and applications, Laplace Transforms, Cauchy-Euler equations, infinite series techniques, systems, numerical techniques and qualitative aspects. Prerequisite: Grade of "C" or better in MATH 268. Semester Offered: Spring or On Demand. [NM Common Course Number MATH 2814, Area II: Mathematics Core]

MEDICAL LABORATORY TECHNOLOGY

MLTS-110 Medical Laboratory - Providing 2 cr.
Overview of medical terminology and survey of specialty areas within the profession. Selected laboratory sessions will be related to health maintenance.

MLTS-120 Intro to Medical Laboratory Science 3 cr.
Introduces the student to the scope of practice of the laboratory professional. Students will use or apply basic concepts used in the medical laboratory including terminology, instrumentation, safety, basic statistics, physician office settings and quality assurance. Selected areas of laboratory practice will be presented.

MLTS-160 Theory of Phlebotomy 2 cr.
Introduction to blood specimen collection and processing. Content areas include related body system anatomy and function, site selection, equipment and supplies, anticoagulants, specimen processing, safety, universal precautions, professionalism, ethics and review of the health care delivery system. Minimum grade required: "C"

MLTS-161 Phlebotomy Practice 2 cr.
100 clock hours of applied phlebotomy experience with a minimum of 100 documented blood procurements. Successful completion of MLTS 160 and MLTS 161 enable the student to sit for one or both of the national certification examinations administered by the American Society of Clinical Pathologists and the National Certifying Agency for Laboratory Professionals. Practice times to be arranged at selected clinical affiliates by the Program Director. Minimum grade required: "C"

- MLTS-210 Clinical Hematology** 4 cr.
Introduction to theory and practice of hematology. Topics include principles of cell production, function, cell counting, classification, and morphology. Manual and automated instrumentation methods and correlation of results with pathophysiology are covered. Minimum grade required: "C".
- MLTS-211 Clinical Hemostasis** 1 cr.
Introduction to theory and practice of hemostasis. Explores mechanisms of coagulation disorders. Manual and automated instrumentation methods and correlation of results with pathophysiology are covered. Minimum grade required: "C".
- MLTS-212 Urinalysis and Body Fluids** 1 cr.
Physical, chemical and microscopic study of urine with emphasis on the changes exhibited in disease with related renal anatomy and physiology. Current instrumentation will be covered. Analysis of other body fluids as spinal and pleural fluid will be included. Prerequisites: MLTS-120, MLTS-160. Semester offered: On demand.
- MLTS-213 Clinical Chemistry Diagnostics** 4 cr.
Lecture and laboratory experience in clinical chemistry techniques and instrumentation utilized to determine state of health, diagnose disease and determine treatment effectiveness. Correlation of test results with pathophysiology will be covered. Minimum grade required: "C".
- MLTS-214 Immunohematology** 2 cr.
Study of basic theory of blood group systems, antibody detection and identification, compatibility testing and investigation of hemolytic disease of the newborn. Topics of blood collection, processing, component preparation and storage also included. Minimum grade required: "C".
- MLTS-215 Immunology Concepts** 1 cr.
Fundamentals of clinical immunology, including cells mediated and antibody mediated immunity. Molecular aspects and theories of testing concepts will be discussed. Correlation of laboratory test results with clinical disease states is covered. Minimum grade required: "C".
- MLTS-216 Clinical Microbiology** 4 cr.
Emphasis on the theoretical foundations and methodologies used in a medical microbiology laboratory. Topics include cultivation, isolation, microscopy, and antibiotic susceptibility testing. Morphological, biochemical, and immunological characteristics employed for identification. Epidemiology and pathogenicity of microorganisms of medical importance and covered. Minimum grade required: "C".
- MLTS-217 Molecular Diagnostics and Special Procedures** 2 cr.
Introduction to principles and application of DNA technology and other special testing in the clinical laboratory. Clinical laboratory experiences in molecular diagnostic techniques and instrumentation will be included. Minimum grade required: "C".
- MLTS-220 Clinical Hematology and Hemostasis** 4 cr.
Clinical laboratory experience in basic hematology techniques and instrumentation to evaluate hematopoietic elements as well as practice in blood coagulation methodologies and at a clinical affiliate site as assigned by the program director. Minimum grade required: "C".
- MLTS-221 Clinical Chemistry Practicum** 3 cr.
Clinical laboratory experience using basic and advanced chemical techniques and instrumentation to evaluate state of health, diagnose disease and determine treatment effectiveness at a clinical affiliate site as assigned by the program director. Minimum grade required: "C".
- MLTS-222 Clinical Microbiology Practicum** 3 cr.
Clinical laboratory experience in basic and advanced study of normal flora and pathogenic microorganisms having medical importance. Includes methods for obtaining and handling specimens for culture as well as principles of current instrumentation at a clinical affiliate site as assigned by the program director. Minimum grade required: "C".
- MLTS-223 Immunology and Immunohematology Practicum** 2 cr.
Clinical laboratory experience in basic practice of techniques used in the immunology and experience developing problem solving abilities as applied to blood group antigens, antibodies, and compatibility testing at a clinical affiliate site as assigned by the program director. Minimum grade required: "C".
- MLTS-230 Career Success Seminar** 2 cr.
This course covers various strategies for career success including analysis of the learning style needs for self and others for training in the clinical laboratory setting, teamwork building, organizational models, resume preparation, and review for the national certification examinations. Minimum grade required: "C".

MEDICAL TRANSCRIPTION

- MTRN-110 Intro to Medical Transcription** 3 cr.
Introduction to the field of medical transcription, English and style essentials for medical transcriptionists, and word processing basics and efficiency exercises. This course will re-introduce students to the keyboard, including finger placement, and teach them to increase typing speed and accuracy through focused key exercises and practice. This course is only open to Medical Transcription students.
- MTRN-120 Medical Terminology** 3 cr.
The student will focus on learning the language of medicine by studying prefixes, suffixes, word roots and their combining forms. This course includes spelling, usage, comprehension and pronunciation. This course is only open to Medical Transcription students.
- MTRN-130 Anatomy and Physiology** 3 cr.
Introduce the Medical Transcription student to anatomy and physiology of the human body. All major body systems are covered. Students are expected to learn basic anatomical terms and their appropriate spellings, as well as symptoms and disease processes associated with each body system. This course is only open to Medical Transcription students.
- MTRN-140 Disease Processes** 2 cr.
A survey of disease processes found in the physiologic systems of the human body, including neurologic, endocrine, reproductive, hematology, cardiovascular, respiratory, urinary, digestive, musculoskeletal, and integumentary. This course is only open to Medical Transcription students.