

MASH-209 Machine Shop Maintenance 3 cr.
Course covers maintenance and repair of manual lathes and milling machines. Students will be in charge of all maintenance items and repairs in the Machine Shop. Other topics will include jigs and fixtures on both milling machines and lathes.

MASH-212 Advanced Machining Techniques 4 cr.
Course is a collaboration of previously learned machining techniques and processes. Complex projects are made using all equipment in the shop necessary to complete complex projects.

MASH-213 Basic CNC Machining 3 cr.
Fundamentals of Computer Numerically Controlled machining are studied. Basic machine set-up, programming and machine nomenclature are covered. Simple parts are programmed using machine controller and then machined.

MASH-216 Advanced Single Point Threading 4 cr.
Study of advanced techniques in single point threading to include, internal, external, double lead, triple lead, right hand, and left hand threads. HSS tools ground by student will be used to cut threads as well as threading with carbide insert tooling and brazed carbide tools.

MASH-217 CAD-CAM Machining 3 cr.
Study and application of CAD-CAM systems and fundamentals that apply to the machine shop. Students will learn how to navigate through CAD-CAM software, create a part, run tool paths, and machine parts virtually on a PC before loading the programs into the machine.

MATHEMATICS

MATH-050 Fundamental Mathematics 3 cr.
Instructs the student on basic arithmetic concepts, addition, subtraction, multiplication, and division of whole numbers and fractions as well as signed numbers. Workshops on how to read a math textbook, overcome math anxiety, and test taking strategies. S/U grading (RR option). Students are allowed only two attempts to successfully complete the course. Semesters offered: Fall, Spring and Summer.

MATH-095 Pre-Algebra (3+2p) 4 cr.
Instructs the student on the basic operations of arithmetic applied to whole numbers, integers, fractions and decimals. Topics include measurement, conversions, scientific notation, percents, ratio and proportions, basic geometry, formulas, and the introduction of variable expressions and linear equations. (RR option course). Prerequisite: Accuplacer score of 26-65 in Arithmetic and 0-40 in Algebra. Students with an Accuplacer score of 26-35 should also enroll in LRNS 095 as a corequisite. Semester offered: Fall, Spring and Summer.

MATH-096 Introductory Algebra (3+2p) 4 cr.
Instructs students in the knowledge of algebra involving linear content, equations, functions, and inequalities in one variable or two variables. This course demonstrates simplifying, and solving methods. Prerequisite: Grade of "C" or better in MATH 095 or Accuplacer score of 66-120 in Arithmetic or 41-60 in Algebra. Semester offered: Fall, Spring and Summer.

MATH-113 Applied Mathematics for Vocational Student 3 cr.
Instructs students in the knowledge of addition, subtraction, multiplication and division of whole numbers, fractions and decimals, ratios and proportions, percents, standard and metric measurements and conversions. Vocational applications are emphasized. Prerequisite: Grade of "C" or better in MATH 095 or Accuplacer score of 66+ (arithmetic) or 41+ (algebra). Semester offered: Fall, Spring and Summer.

MATH-114 Math for Health Careers 3 cr.
This course introduces the computational skills needed to study in health careers programs. Students will solve word problems specific to medication orders. Prerequisite: Grade of "C" or better in MATH 095 or Accuplacer score of 66+ (arithmetic) or 41+ (algebra). Semester offered: Fall, Spring and Summer On Demand.

MATH-115 Intermediate Algebra-Applications 4 cr.
Instructs students in the knowledge of algebra involving nonlinear content including expressions, equations, functions and inequalities. This course emphasizes simplifying and solving methods for polynomial, quadratic, rational, absolute value, radical, exponential, and logarithmic expressions and equations. Prerequisite: Grade of "C" or better in MATH 096 or Accuplacer score of 61 – 103 (algebra). Semester offered: Fall, Spring and Summer.

MATH-116 Math for High Tech Careers 3 cr.
Instructs students in the knowledge of mathematics related to the electronics field, including scientific calculations, conversions, methods of algebra leading to solving and manipulation of formulas, and more. Prerequisite: Grade of "C" or better in MATH 096 or Accuplacer score of 41-60 (algebra). Semester offered: Fall and Spring.

MATH-121 Mathematics for the Elementary Teacher I 3 cr.
A development of the properties, concepts, and logical reasoning of the arithmetic of whole numbers, including problem solving techniques, set theory, and more. Prerequisite: Grade of "C" or better in MATH 115 or Accuplacer score of 104-120 (Algebra). Semester Offered: Fall and Spring.

MATH-122 Mathematics for the Elementary Teacher II 3 cr.
A development of the properties, concepts, and logical reasoning of (1) the arithmetic of real numbers, (2) statistics, and (3) probability. Topics include fractions, decimals, ratios, proportions, percent, integers, rational numbers, real numbers, algebra, statistics, and probability. Prerequisite: Grade of "C" or better in MATH 121. Semester Offered: Fall and Spring.

MATH-130 Conceptual Mathematics 3 cr.
Practical mathematical concepts for non-science majors. Topics include set theory, geometry, counting methods, probability, statistics, and finance. Critical thinking and problem solving skills are stressed. Prerequisite: Grade of "C" or better in MATH 096 or Accuplacer score of 61-103 (algebra). Semester Offered: Fall, Spring, and Summer.

MATH-180 Trigonometry 3 cr.
Instructs the student in the knowledge of triangles, radian and degree measure, trigonometric functions, trigonometric identities, properties, inverse trigonometric functions, polar coordinates, vectors. Prepares the student to utilize trigonometry in the analysis of calculus. 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 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"