

**LEAS-227 Corporation and Securities Law** 3 cr.  
 This course will cover state Blue Sky Laws and will include an introduction to the rules and procedures governing the federal Securities and Exchange Commission (SEC). The law of insider trading will be discussed along with the other antifraud provisions of federal and state security laws. Prerequisites: Permission of instructor. Semester Offered: On Demand.

**LEAS-229 Consumer Law** 3 cr.  
 The study of legal rights and obligations pertaining to consumer transactions. State consumer protection laws, the federal Magnuson-Moss Act, UCC warranties, product or liability, and federal truth-in-lending laws will be covered. The consumer protection statutes for the Navajo Nation will be studied. Prerequisites: Permission of instructor. Semester Offered: On Demand

**LEAS-280 Cooperative Education** 3 cr.  
 Supervised cooperative work program. Students are employed in an approved occupation in the legal field. Students will be supervised and rated by the employer and instructor. Students will periodically meet with the instructor and may also be required to report on a variety of films, readings, or seminars. Semesters Offered: Fall, Spring and Summer.

**MACHINE SHOP**

**MASH-115 Machine Shop Blueprint Reading** 3 cr.  
 Introduction to language of lines, sketching, reading, and interpreting detail working drawings. Semester offered: Fall and Spring.

**MASH-116 Basic Machine Shop** 4 cr.  
 Course is an introduction-to the machine shop environment. Operations of the drill press, band saw, lathe, and layout of tools identification will be covered. The course will also include basic lathe and general machining operations.

**MASH-117 Machinist Measurements** 3 cr.  
 Course will cover measurement methods used in the machining industry. All measuring devices and methods used in the machining industry will be covered. Student will practice taking cuts, selecting proper measuring device and taking measurements.

**MASH-118 Basic Lathe Operations** 4 cr.  
 Course will cover basic tooling and lathe operations. Carbide and HSS turning uses are focused on. Feeds and spindle speeds are emphasized throughout the course. An introduction to the milling machine is also covered.

**MASH-119 Single Point Threading** 3 cr.  
 The study and application of single point threading on engine lathe. Tool grinding, fundamentals of threading, thread nomenclature, machine setup, spindle speeds, tool geometry, HSS, braised carbide and insert threading tools will be covered.

**MASH-122 Basic Milling Operations** 4 cr.  
 Course covers basic milling operation, milling machine nomenclature, controls and applications of face milling, side milling, shoulder milling,

and head indication, and speed feeds and depth of cuts. The selection of tools, tooling applications, HSS, solid carbide, and insert type tooling are also included.

**MASH-123 Machining Calculations** 3 cr.  
 Course demonstrates the fundamentals of feeds and speeds to machine operators. Speeds and feeds on milling machine tooling (both HSS and carbide inserts) are covered as well as speeds and feeds for single point tooling on lathe operations.

**MASH-124 Precision Surface Grinding** 4 cr.  
 Introduction to precision grinding, machine safety, setup, basic grinding operations, coolants, stone dressing, and proper wheel selection. The proper use of fixtures and fastening devices used in surface grinding, surface grinding theory, care, maintenance and lubrication of the surface grinder are covered. Basic instruction of tool post grinding attachment on engine lathe will be demonstrated.

**MASH-129 Tool Grinding** 3 cr.  
 Course pays close attention to the grinding, sharpening and dressing of a variety of different cutting tools. Different tool geometrics are examined and used for the corresponding materials being machined.

**MASH-132 Advanced Lathe Operations** 4 cr.  
 Students will learn advanced lathe operations such as cutting tapers on lathe, using taper attachment, offsetting tail stock, using dog leg, using knurling tools, and cutting inside tapers.

**MASH-133 Other Machining Operations** 3 cr.  
 Course covers other machining operations such as bore end bells, setting-up odd shaped items in lathe, making bearings, using sunnen hone, and cutting large radius in lathe and on mill.

**MASH-134 Advanced Milling Operations** 4 cr.  
 Course offers students advanced milling operations such as angle head set-up, using criterion heads, using indexing heads, and using rotary table.

**MASH-135 Jigs and Fixtures** 3 cr.  
 Student will build fixtures, build jigs and learn max production techniques.

**MASH-206 Advanced Lathe Operations** 4 cr.  
 Course develops increased accuracy on the lathe for more challenging operations. This will include external and internal turning, precision boring, indication of odd shaped objects in 4-jaw chuck, and precision thread cutting.

**MASH-207 Specialized Machining Operations** 3 cr.  
 Course covers various machine shop practices. Students will learn how to apply previously learned machining elements to real world applications. Unique machining techniques will also be learned throughout the course.

**MASH-208 Advanced Milling Operations** 4 cr.  
 Course covers the study of applications of advanced milling operations on vertical and horizontal milling machines. Includes key way cutting, gear cutting, index head use, and precision boring and precision milling.

**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: