MATHEMATICS (804)

804-107. College Mathematics. (3 Credits)
Review and develop fundamental concepts of mathematics pertinent to the areas of arithmetic and algebra; geometry and trigonometry; and probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections and using calculators. Topics include performing arithmetic operations and simplifying algebraic expressions, solving linear equations and inequalities in one variable, solving proportions and incorporating percent applications, manipulating formulas, solving and graphing systems of linear equations and inequalities in two variables, finding areas and volumes of geometric figures, applying similar and congruent triangles, converting measurements within and between U.S. and metric systems, applying Pythagorean Theorem, solving right and oblique triangles, calculating probabilities, organizing data and interpreting charts, calculating central and spread measures, and summarizing and analyzing data.
Prerequisites: 834-109 (may be taken concurrently) with a minimum grade of C or 804-304 with a minimum grade of C or 804-169A with a minimum grade of C or 854-752 with a minimum grade of B- or High School GPA 2.60 or Higher or College Proficiency - Math or COMPASS-Pre-Algebra with a score of 42 or ACT-Math with a score of 17 or ASSET-Numerical Skills with a score of 38 or Accuplacer Arithmetic60 or ALEKS Math Placement with a score of 14 or GED Math - 2014 Series with a score of 165 or Next-Gen Accuplacer Arithmetic with a score of 258
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=107)

804-113. College Technical Math 1A. (3 Credits)
Topics include solving linear, quadratic, and rational equations; graphing; formula rearrangement; solving systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems.
Prerequisites: 834-109 (may be taken concurrently) with a minimum grade of C or 804-123 with a minimum grade of C or 854-752 with a minimum grade of B- or ASSET-Numerical Skills with a score of 39 or Accuplacer Arithmetic60 or ACT-Math with a score of 17 or ALEKS Math Placement with a score of 30 or COMPASS-Pre-Algebra with a score of 44 or College Proficiency - Math or GED Math - 2014 Series with a score of 165 or High School GPA 2.60 or Higher or Next-Gen Accuplacer Arithmetic with a score of 258
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=113)

804-114. College Technical Math 1B. (2 Credits)
This course is a continuation of College Technical Mathematics 1A. Topics include: measurement systems; computational geometry; right and oblique triangle trigonometry; and trigonometric functions on the unit circle. Emphasis will be on the application of skills to technical problems.
Prerequisites: (804-113 (may be taken concurrently) with a minimum grade of C or 804-107 with a minimum grade of C or 834-110 with a minimum grade of C or COMPASS-Algebra Skills with a score of 46 or ASSET-Elementary Algebra with a score of 45 or ACT-Math with a score of 21 or ALEKS Math Placement with a score of 46 or GED Math - 2014 Series with a score of 175 or Accuplacer Elementary Algebra55 or Next-Gen Accuplacer QR Algebra with a score of 260)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=114)

804-115. College Technical Math 1. (5 Credits)
Learn to solve linear, quadratic and rational equations; graphing; formula rearrangement; solving systems of equations; percent; proportions; measurement systems; computational geometry; right and oblique triangle trigonometry; trigonometric functions on the unit circle; and operations on polynomials. Emphasis will be on the application of skills to technical problems. This course is the equivalent of successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B.
Prerequisites: (834-109 (may be taken concurrently) with a minimum grade of C or 854-752 with a minimum grade of B- or COMPASS-Algebra Skills with a score of 32 or ASSET-Elementary Algebra with a score of 40 or ACT-Math with a score of 18 or ALEKS Math Placement with a score of 30 or Accuplacer Elementary Algebra55 or Next-Gen Accuplacer QR Algebra with a score of 260)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=115)

804-116. College Technical Math 2. (4 Credits)
Learn vectors, trigonometric functions and their graphs, identities, exponential and logarithmic functions and equations, radical equations, equations with rational exponents, dimension of a circle, velocity, sine and cosine graphs, complex numbers in polar and rectangular form, trigonometric equations, conic sections and analysis of statistical data. Emphasis will be on the application of skills to technical problems.
Prerequisites: (804-115 with a minimum grade of C or 804-114 with a minimum grade of C or COMPASS-Algebra Skills with a score of 66 or ACT-Math with a score of 23 or ALEKS Math Placement with a score of 61 or Accuplacer College Level Math43 or Next-Gen Accuplacer AdvAlgebra with a score of 267 or ASSET-Elementary Algebra with a score of 45)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=116)

804-118. Interm Algebra w Apps. (4 Credits)
Learn algebra content with applications. Topics include properties of real numbers, order of operations, algebraic solution for linear equations and inequalities, operations with polynomial and rational expressions, operations with rational exponents and radicals, algebra of inverse, logarithmic and exponential functions.
Prerequisites: (COMPASS-Algebra Skills with a score of 46 or ASSET-Elementary Algebra with a score of 45 or ACT-Math with a score of 21 or ALEKS Math Placement with a score of 30 or GED Math - 2014 Series with a score of 175 or 834-110 (may be taken concurrently) with a minimum grade of C or Accuplacer Elementary Algebra55 or Next-Gen Accuplacer QR Algebra with a score of 260)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=118)

804-123. Math w Business Apps. (3 Credits)
Cover real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest and annuities. Apply math concepts to the purchasing/buying and selling process, and use basic statistics with business/consumer applications.
Prerequisites: (High School GPA 2.60 or Higher or College Proficiency - Math or COMPASS-Pre-Algebra with a score of 42 or ACT-Math with a score of 17 or ASSET-Numerical Skills with a score of 38 or Accuplacer Arithmetic60 or Next-Gen Accuplacer Arithmetic with a score of 258 or ALEKS Math Placement with a score of 14 or GED Math - 2014 Series with a score of 165 or 804-169A with a minimum grade of C or 854-752 with a minimum grade of B- or 834-109 (may be taken concurrently) with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=123)

804-133. Math & Logic. (3 Credits)
Students will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra Boolean algebra and number bases.
Prerequisites: (834-110 (may be taken concurrently) with a minimum grade of C or 804-107 with a minimum grade of C or 804-123 with a minimum grade of C or ASSET-Elementary Algebra with a score of 45 or Accuplacer Elementary Algebra55 or ACT-Math with a score of 21 or ALEKS Math Placement with a score of 30 or COMPASS-Algebra Skills with a score of 46 or GED Math - 2014 Series with a score of 175 or Next-Gen Accuplacer QR Algebra with a score of 260)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=133)

804-138. Physical Mathematics. (3 Credits)
Introductory topics of algebra are presented with applications related to scientific concepts and procedures. Scientific notation, dimensional analysis, ratio and proportion, metric and apothecaries' measure, medical dosages and graphing of data are studied.
Prerequisites: (High School GPA 2.60 or Higher or College Proficiency - Math or COMPASS-Pre-Algebra with a score of 25 or 854-793 with a minimum grade of S or ACT-Math with a score of 14 or ASSET-Numerical Skills with a score of 32 or Accuplacer Arithmetic34 or Next-Gen Accuplacer Arithmetic with a score of 210 or ALEKS Math Placement6)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=138)

804-156. Calculus 2. (4 Credits)
This course is a continuation of Calculus 1, 804-198. Explore topics including integration techniques, first-order differential equations, parametric equations, polar coordinates, analytic geometry and infinite series. Emphasis is placed on applications to problems in science and engineering.
Prerequisites: (804-198 with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=156)

804-167. Calculus 3. (4 Credits)
This course is a continuation of 804-156 Calculus 2. Explore topics including vectors and analytic geometry, vector-valued functions, multi-variable functions and partial derivatives, multiple integrals and vector fields.
Prerequisites: (804-156 (may be taken concurrently) with a minimum grade of C)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=167)

804-189. Introductory Statistics. (3 Credits)
Students taking Introductory Statistics display data with graphs, describe distributions with numbers perform correlation and regression analyses, and design experiments. They use probability and distributions to make predictions, estimate parameters and test hypotheses. They draw inferences about relationships including ANOVA.
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=189)

804-195. College Algebra w Apps. (3 Credits)
Cover skills needed for success in calculus and many application areas on a baccalaureate level. Topics include the real and complex number systems, polynomials, exponents, radicals, solving equations and inequalities (linear and nonlinear), relations and functions, systems of equations and inequalities (linear and nonlinear), matrices, graphing, conic sections, sequences and series, combinatorics and the binomial theorem.
Prerequisites: (804-118 (may be taken concurrently) with a minimum grade of C or COMPASS-Algebra Skills with a score of 66 or ALEKS Math Placement with a score of 46 or ACT-Math with a score of 24 or Accuplacer College Level Math43 or Next-Gen Accuplacer AdvAlgebra with a score of 267)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=195)

804-196. Trigonometry w Apps. (3 Credits)
Learn circular functions, graphing of trigonometry functions, identities, equations, trigonometric functions of angles, inverse functions, solutions of triangles, complex numbers, DeMoivre's Theorem, polar coordinates and vectors.
Prerequisites: (804-195 (may be taken concurrently) with a minimum grade of C or ALEKS Math Placement with a score of 61)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=196)

804-198. Calculus 1. (4 Credits)
Analyze and graph algebraic expressions, especially conic sections. Develop an intuitive understanding of limits, derivatives and integrals. Apply the derivative and the integral to certain physical problems.
Prerequisites: (804-196 (may be taken concurrently) with a minimum grade of C or ALEKS Math Placement with a score of 76)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=198)

804-199. Special Topics in Mathematics. (3 Credits)
An individualized course to cover various concepts of mathematics to suit the needs of a student.
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=199)

804-201. Intermediate Algebra. (4 Credits)
Learn to apply algebra content and gain an introduction to functions and complex numbers. Build upon the arithmetic of real numbers by using variable equations to solve problems. Topics include graphing and finding algebraic solutions for linear equations and inequalities, quadratic, exponential, polynomial, radical and rational equations.
Prerequisites: 834-110 (may be taken concurrently) with a minimum grade of C or COMPASS-Algebra Skills with a score of 42 or ACT-Math with a score of 21 or ASSET-Elementary Algebra with a score of 45 or Accuplacer Elementary Algebra55 or Next-Gen Accuplacer QR Algebra with a score of 260 or ALEKS Math Placement with a score of 30 or GED Math - 2014 Series with a score of 175
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=201)

804-211. Quantitative Reasoning. (3 Credits)
Develop analytic reasoning and the ability to solve quantitative problems. Explore topics in numerical literacy, mathematical modeling and statistical analysis, including rates, ratios and proportions; construction and interpretation of graphs; descriptive and inferential statistics; linear and nonlinear modeling; and math of finance. An emphasis is placed on the appropriate use of units and dimensions, estimates, mathematical notation and available technology.
Prerequisites: 834-109 (may be taken concurrently) with a minimum grade of C or 804-304 (may be taken concurrently) with a minimum grade of C or 804-169A (may be taken concurrently) with a minimum grade of C or 854-752 with a minimum grade of B- or College Proficiency - Math or High School GPA 2.60 or Higher or COMPASS-Pre-Algebra with a score of 42 or ACT-Math with a score of 17 or ASSET-Numerical Skills with a score of 38 or Accuplacer Arithmetic with a score of 60 or Next-Gen Accuplacer Arithmetic with a score of 258 or ALEKS Math Placement with a score of 14 or GED Math - 2014 Series with a score of 165 or Next-Gen Accuplacer QR Algebra with a score of 260
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=211)

804-212. College Algebra. (3 Credits)
Gain skills to succeed in Calculus and many application areas at the baccalaureate level. Explore topics including the real and complex number systems, polynomials, exponents, radicals, solving equations and inequalities, relations and functions, systems of equations and inequalities, graphing and conic sections.
Prerequisites: 804-118 (may be taken concurrently) with a minimum grade of C or 804-201 (may be taken concurrently) with a minimum grade of C or ALEKS Math Placement with a score of 46 or ACT-Math with a score of 24 or COMPASS-Algebra Skills with a score of 66 or Accuplacer College Level Math43 or Next-Gen Accuplacer AdvAlgebra with a score of 267
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=212)

804-301. Applied Math. (2 Credits)
Develop the calculating, measuring, and estimating skills used in the construction trades. Discuss topics such as calculations with whole numbers, fractions, and decimals; calculations using percents; measures of length, area, and volume; and the use of power and roots.
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=301)

804-304. Industrial Math I. (2 Credits)
Explore the topics of applied arithmetic and algebra. Study concepts related to measurement, fractions, decimals, percents, ratio and proportion, signed numbers, formula substitution, solutions to equations, tapers and gears. Calculate the areas and volumes of common geometric shapes.
Prerequisites: (High School GPA 2.60 or Higher or College Proficiency - Math or COMPASS-Pre-Algebra with a score of 25 or 854-793 (may be taken concurrently) with a minimum grade of S or ACT-Math with a score of 14 or ASSET-Numerical Skills with a score of 32 or Accuplacer Arithmetic34 or Next-Gen Accuplacer Arithmetic with a score of 210 or ALEKS Math Placement6)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=304)

804-305. Industrial Math II. (2 Credits)
Examine topics in geometry and trigonometry that are related to the metalworking trades. Practice applying geometric theorems and solving both right and oblique triangle problems.
Prerequisites: (804-304 (may be taken concurrently) with a minimum grade of D-)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=305)

804-306. Industrial Math III. (2 Credits)
Learn the problem-solution techniques of advanced applied trigonometry, and become familiar with solving compound angle problems.
Prerequisites: (804-305 with a minimum grade of D- or 804-107 with a minimum grade of D-)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=306)

804-504. Industrial Math I. (1 Credit)
Explore the topics of applied arithmetic and algebra. Study concepts related to measurement, fractions, decimals, percents, ratio and proportion, signed numbers, formula substitution, solutions to equations, tapers and gears. Calculate the areas and volumes of common geometric shapes.
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=504)

804-505. Industrial Math II. (1 Credit)
Examine topics in geometry and trigonometry that are related to the metalworking trades. Practice applying geometric theorems and solving both right and oblique triangle problems.
Prerequisites: (804-504 with a minimum grade of D- or 804-304 with a minimum grade of D-)
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=505)

804-991. Mathematics Elective. (1-5 Credits)
This is a mathematics elective to recognize transfer credit.
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=991)

804-993. Mathematics Elective. (1-5 Credits)
This is a mathematics elective to recognize transfer credit.
See sections of this course (http://www.wctc.edu/academics/programs-courses/course-search/course-search-listing.php?code=804&num=993)