

MATHEMATICS (804)

Information provided includes course descriptions by subject only.
For complete 2022-2023 programs/academic plans, please refer to
Academic Programs (<http://catalog.blackhawk.edu/academics/>).

804-1050 General Math-Orientation

Credits: 0

In House for Online Orientation only.

Aid Code: 10 - undefined.

Complete Course Listing

804-107 College Mathematics

Credits: 1-3

This course is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) 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.

Aid Code: 10 - undefined.

Pre-requisites: (ASSET Numerical Skills, 40 or COMPASS Pre-Algebra Skills, 044 or ACT Math, 17 or Test Waived-College Degree or 834-109 or 834-109) or (AccuPlacer Arithmetic, 089 or (AccuPlacer Arithmetic, 065 and AccuPlacer Elem Algebra, 030))

Complete Course Listing

804-107E College Math Chall Exam

Credits: 1-3

Aid Code: 10 - undefined.

Complete Course Listing

804-1100 Elem Algebra w Apps Orient

Credits: 0

Aid Code: 10 - undefined.

Complete Course Listing

804-113 College Technical Mathematics 1A

Credits: 1-3

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 applications of skills to technical problems. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1.

Aid Code: 10 - undefined.

Pre-requisites: (804-110 or 834-110) and (ASSET Numerical Skills, 45 or Compass Algebra, 046 or ACT Math, 20 or SAT Mathematics, 390) or (AccuPlacer Arithmetic, 089 and AccuPlacer Elem Algebra, 050) or (Next Gen AccuPlacer Arithmetic, 272 and Next Gen AccuPlacer QRAS, 243)

Complete Course Listing

804-113E College Tech Math 1A ChallExam

Credits: 1-3

Aid Code: 10 - undefined.

Complete Course Listing

804-114 College Technical Mathematics 1B

Credits: 1-2

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. Successful completion of or concurrent enrollment in College Technical Mathematics 1A is required for course enrollment. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1.

Aid Code: 10 - undefined.

Pre-requisites: 804-113

Complete Course Listing

804-114E College Tech Math 1B ChallExam

Credits: 1-2

Aid Code: 10 - undefined.

Complete Course Listing

804-115 College Technical Mathematics 1

Credits: 1-5

Topics include: solving 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.

Aid Code: 10 - undefined.

Pre-requisites: (ASSET Numerical Skills, 45 or Compass Algebra, 046 or (Next Gen AccuPlacer Arithmetic, 272 and Next Gen AccuPlacer QRAS, 243) or ACT Math, 20)

Complete Course Listing

804-118 Intermediate Algebra with Applications

Credits: 1-4

This course offers 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.

Aid Code: 10 - undefined.

Pre-requisites: (ASSET Numerical Skills, 45 or Compass Algebra, 046 or ACT Math, 20 or 804-110 or 834-110 or (AccuPlacer Arithmetic, 089 and AccuPlacer Elem Algebra, 050) or (Next Gen AccuPlacer Arithmetic, 272 and Next Gen AccuPlacer QRAS, 243))

Complete Course Listing

804-118E Interm Algebra w Apps Chall Ex

Credits: 1-4

Complete Course Listing

804-123 Math with Business Applications

Credits: 1-3

This course covers...real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications.

Aid Code: 10 - undefined.

Pre-requisites: (ASSET Reading Skills, 39 or COMPASS Reading Skills, 073 or ACT Reading, 16 or AccuPlacer Reading Comp, 076 or Test Waived-College Degree or 809-198 or 809-199 or 838-104 or 838-104 or 801-195 or 801-136 or 801-196 or 801-198 or 804-133 or 806-110 or 806-112 or 806-118 or 806-134 or 806-139 or 806-154 or 806-177 or 806-186 or 806-194 or 806-199 or 809-103 or 809-166 or 809-172 or 809-188 or 809-195 or 809-143 or 809-196 or 809-198) and (ASSET Numerical Skills, 40 or COMPASS Pre-Algebra Skills, 044 or ACT Math, 17 or Test Waived-College Degree or 834-109 or 834-109 or AccuPlacer Arithmetic, 089 or AccuPlacer Arithmetic, 065 and AccuPlacer Elem Algebra, 030) or (Next Gen AccuPlacer Arithmetic, 272) or (Next Gen AccuPlacer Arithmetic, 257 and Next Gen AccuPlacer QRAS, 210)

Complete Course Listing

804-123E Math W/Bus Apps ChallExam

Credits: 1-3

Aid Code: 10 - undefined.

Complete Course Listing

804-133 Math and Logic

Credits: 1-3

Students will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases.

Aid Code: 10 - undefined.

Pre-requisites: (ASSET Numerical Skills, 40 or COMPASS Pre-Algebra Skills, 044 or ACT Math, 17 or (AccuPlacer Arithmetic, 065 or AccuPlacer Arithmetic, 089 and AccuPlacer Elem Algebra, 030 or Test Waived-College Degree) and (COMPASS Reading Skills, 073) or (ACT Reading, 16 or ASSET Reading Skills, 39 or SAT Reading, 330 or 838-104 or 838-104 or AccuPlacer Reading Comp, 076 or Next Gen AccuPlacer Reading, 251 or Test Waived-College Degree) or 801-195 or 801-136 or 801-196 or 801-198 or 806-110 or 806-112 or 806-118 or 806-134 or 806-139 or 806-154 or 806-177 or 806-186 or 806-194 or 806-199 or 809-103 or 809-166 or 809-172 or 809-188 or 809-195 or 809-143 or 809-196 or 809-198 or 809-199) and (COMPASS Reading Skills, 51 or ACT Reading, 12 or SAT Reading, 270 or ASSET Reading Skills, 55 or Next Gen AccuPlacer Reading, 236)

Co-requisites: (838-104)

Complete Course Listing

804-133E Math & Logic ChallExam

Credits: 1-3

Aid Code: 10 - undefined.

Complete Course Listing

804-134 Mathematical Reasoning**Credits:** 1-3

All college students, regardless of their college major, need to be able to make reasonable decisions about fiscal, environmental, and health issues that require quantitative reasoning skills. An activity based approach is used to explore numerical relationships, graphs, proportional relationships, algebraic reasoning, and problem solving using linear, exponential and other mathematical models. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts.

Aid Code: 10 - undefined.

Pre-requisites: ((834-109 or Test Waived-College Degree) or (ASSET Reading Skills, 39 or COMPASS Reading Skills, 73 or ACT Reading, 16 or AccuPlacer Reading Comp, 76 or SAT Reading, 330 or Next Gen AccuPlacer Reading, 251) and (COMPASS Reading Skills, 51 or ACT Reading, 12 or SAT Reading, 270 or ASSET Reading Skills, 55 or Next Gen AccuPlacer Reading, 236))) and ((Next Gen AccuPlacer Arithmetic, 272 or (Next Gen AccuPlacer Arithmetic, 257 or Next Gen AccuPlacer QRAS, 210 or AccuPlacer Arithmetic, 89)) or (AccuPlacer Arithmetic, 65 and (AccuPlacer Elem Algebra, 30 or COMPASS Pre-Algebra Skills, 44 or SAT Mathematics, 390)) or (ACT Math, 17) and (Next Gen AccuPlacer Arithmetic, 243 or AccuPlacer Arithmetic, 50 or COMPASS Pre-Algebra Skills, 25 or SAT Mathematics, 340 or ACT Math, 15)))

Co-requisites: (838-104 or (854-805

Complete Course Listing

804-189 Introductory Statistics**Credits:** 1-3

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.

Aid Code: 10 - undefined.

Pre-requisites: (804-106 or 804-107 or 804-118 or 804-110 or 834-110) and (ASSET Numerical Skills, 45 or Compass Algebra, 046 or ACT Math, 20 or SAT Mathematics, 390) or (AccuPlacer Arithmetic, 089 and AccuPlacer Elem Algebra, 050) or (Next Gen AccuPlacer Arithmetic, 272 and Next Gen AccuPlacer QRAS, 243)

Complete Course Listing

804-195 College Algebra w Apps**Credits:** 1-3

This course covers those 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.

Aid Code: 10 - undefined.

Complete Course Listing

804-196 Trigonometry w Apps**Credits:** 1-3

Topics include 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.

Aid Code: 10 - undefined.**Pre-requisites:** (ASSET Numerical Skills, 49 or Compass Algebra, 066 or ACT Math, 23 or 804-110)

Complete Course Listing

804-197 College Algebra and Trigonometry with Applications**Credits:** 5

This course covers those 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.

Aid Code: 10 - undefined.**Pre-requisites:** (804-118) or (ACT Math, 22) or (Next Gen AccuPlacer Arithmetic, 276) or (AccuPlacer Arithmetic, 85)

Complete Course Listing

804-198 Calculus 1**Credits:** 1-4

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.

Aid Code: 10 - undefined.

Complete Course Listing

804-211 Quantitative Reasoning**Credits:** 3

This course is intended to develop analytic reasoning & the ability to solve quantitative problems. Topics to be covered include construction & interpretation of graphs, functional relationships, descriptive Stat., geometry & spatial visualization, math of finance, exponential growth, & basic probability. Appropriate use of units & dimensions, estimates, mathematical notation & available technology will be emphasized throughout the course.

Aid Code: 20 - undefined.

Complete Course Listing

804-304 Mathematic Fundamentals

Credits: 1-2

This course consists of instructional units that incorporate hands on activities and projects. It is intended to give students a review of the basic principles of arithmetic, including whole numbers, fractions, and decimals. Estimation of length, angles and mathematical results is also covered. Additional topics include ratios, proportions, powers, analyzing graphs and an introduction to algebra. Proper calculator usage will be discussed throughout the course.

Aid Code: 31 - undefined.

Pre-requisites: (ASSET Numerical Skills, 35 or COMPASS Pre-Algebra Skills, 025 or ACT Math, 15 or AccuPlacer Arithmetic, 050 or Test Waived College Degree or 854-781 or 854-781 or 854-782 or 854-782 or 854-783 or 854-783 or 854-784 or 854-784 or 854-785 or 854-785 or 854-786 or 854-786 or 854-787 or 854-787)

Complete Course Listing

804-306 Shop Mathematics I

Credits: 1-2

This course includes the basic principles of arithmetic beginning with whole numbers and common fractions, and continuing through decimals, percentages, ratios, proportions and averages, and measurements. These principles are applied to typical shop problems throughout the course.

Aid Code: 31 - undefined.

Complete Course Listing

804-306E Shop Math 1 ChallExam

Credits: 1-2

Aid Code: 31 - undefined.

Complete Course Listing

804-308 Shop Mathematics II

Credits: 1-2

This course is a continuation of Shop Mathematics I and includes the study of the properties of circles, volumes and surface areas of various solids, an introduction to practical algebra and trigonometric principles used in solving right triangles as well as applications of the sine and cosine law in solving oblique triangles.

Aid Code: 31 - undefined.

Pre-requisites: 804-306

Complete Course Listing

804-308E Shop Math II ChallExam

Credits: 1-2

Aid Code: 31 - undefined.

Complete Course Listing

804-315 Trade Math 1

Credits: 1

This course includes the basic principles of arithmetic beginning with whole numbers and common fractions, and continuing through decimals, percentages, ratios, proportions and averages, and measurements.

Aid Code: 31 - undefined.

Complete Course Listing

804-316 Trade Math 2

Credits: 1

This course applies the basic principles of arithmetic (including whole numbers and common fractions, and continuing through decimals, percentages, ratios, proportions and averages, and measurements) to typical trade mathematics problems.

Aid Code: 31 - undefined.

Complete Course Listing

804-404 Shop Math

Credits: 0.2-7.5

Aid Code: 47 - undefined.

Complete Course Listing

804-405 Beginning Shop Math-2

Credits: .2

This course will teach beginning Shop Math concepts for 2 hours; working with whole numbers, fractions, and decimals.

Aid Code: 47 - undefined.

Complete Course Listing

804-406 Intermediate Shop Math-2

Credits: .2

This course will teach intermediate Shop Math concepts for 2 hours; predicting, applying, converting etc., ratio proportion and percent.

Aid Code: 47 - undefined.

Complete Course Listing

804-409 Tech Math

Credits: 0.1-6.4

Aid Code: 47 - undefined.

Complete Course Listing

804-460 Math-Business

Credits: 0.1-1.5

Aid Code: 47 - undefined.

Complete Course Listing

804-476 Shop Math-Occupational Trades

Credits: 0.1-1.5

Aid Code: 42 - undefined.

Complete Course Listing

804-479 Basic Trigonometry**Credits:** 0.1-6**Aid Code:** 47 - undefined.

Complete Course Listing

804-501 Math For Plumbing Appr**Credits:** 1**Aid Code:** 50 - undefined.

Complete Course Listing