

MATHEMATICS (804)

Information provided includes course descriptions by subject only. For complete 2024-2025 programs/academic plans, please refer to Academic Programs (<http://catalog.blackhawk.edu/academics/>).

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: (834-109) or (GPA High School, 2.6 or ACT Math, 17 or SAT Mathematics, 510 or Next Gen AccuPlacer Arithmetic, 272 or Next Gen AccuPlacer QRAS, 210 or GED-Math, 165)

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: (834-109) or (GPA High School, 2.6 or ACT Math, 17 or SAT Mathematics, 510 or Next Gen AccuPlacer Arithmetic, 272 or Next Gen AccuPlacer QRAS, 210 or GED-Math, 165)

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: (or (GPA High School, 2.75 or ACT Math, 20 or SAT Mathematics, 540 or Next Gen AccuPlacer QRAS, 244 or Next Gen AccuPlacer AAF, 237) and (GPA High School, 2.6 or ACT Math, 17 or SAT Mathematics, 510 or Next Gen AccuPlacer Arithmetic, 272 or Next Gen AccuPlacer QRAS, 210 or GED-Math, 165))) and ((GPA High School, 2.6 or ACT Reading, 16 or Evidence-Based Read/Writ Score, 480 or Next Gen AccuPlacer Reading, 251 or Test Waived-College Degree or GED-Reading, 165 or College Transfer Course Cmpltd, 1) and (GPA High School, 2.0 or ACT Reading, 12 or Evidence-Based Read/Writ Score, 390 or Next Gen AccuPlacer Reading, 236)))

Co-requisites: (854-800 or (838-104

Complete Course Listing

804-118E Interm Algebra w Apps Chall Ex

Credits: 1-4

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 (GPA High School, 2.6 or ACT Math, 17 or SAT Mathematics, 510 or Next Gen AccuPlacer Arithmetic, 272 or Next Gen AccuPlacer QRAS, 210 or GED-Math, 165) and (GPA High School, 2.0 or ACT Math, 15 or SAT Mathematics, 320 or Next Gen AccuPlacer Arithmetic, 243))) and (or (GPA High School, 2.6 or ACT Reading, 16 or Evidence-Based Read/Writ Score, 480 or Next Gen AccuPlacer Reading, 251 or GED-Reading, 165 or Test Waived-College Degree or College Transfer Course Cmpltd, 1) and (GPA High School, 2.0 or ACT Reading, 12 or Evidence-Based Read/Writ Score, 390 or Next Gen AccuPlacer Reading, 236)))

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

[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: (804-118 or 804-211) or ((GPA High School, 2.75 and HS Algebra II Completed, 1) or (ACT Math, 24 or SAT Mathematics, 590 or Next Gen AccuPlacer AAF, 250))

[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: 20 - 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: 20 - undefined.

Pre-requisites: 804-118

[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 804-211) or ((GPA High School, 2.75 and HS Algebra II Completed, 1) or (ACT Math, 24 or SAT Mathematics, 590 or Next Gen AccuPlacer AAF, 250))

[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: 20 - undefined.

Pre-requisites: 804-197

[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.

Pre-requisites: 804-134

[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/Trade Math 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) or (804-315)[Complete Course Listing](#)**804-308E Shop Math II ChallExam****Credits:** 1-2**Aid Code:** 31 - undefined.[Complete Course Listing](#)**804-315 Trade Math****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](#)