

MATHEMATICS (MATH)

NOTE: Course numbering in MATH classes is not based upon sequential content and does not follow any particular order (i.e. a course with a lower course number does not necessarily mean that it is a prerequisite for a course with a higher course number). Always confirm prerequisites on the individual course descriptions and review your degree/certificate requirements for the required course(s). For courses with a placement score option, students should refer to the [Math Placement chart](#) for detailed information.

NOTE: Students using the GI Bill® for tuition purposes must complete remedial courses in-person in order to receive benefits. This applies to any class with a course number below 100.

MATH 085 College Readiness Math

(0 Credits, Fall/Spring/Summer)

College Readiness Math is intended to help students improve their basic math skills and is offered as a zero cost, zero credit option through CWI's Adult Education program. This course serves to prepare students with essential mathematics and pre-algebra skills necessary for the college prep math courses of Introductory Prep Math (MATH 097) and Expanded Prep Math (MATH 099). Based on a student's CWI Math Diagnostic exam score, they may be asked to take the CASAS Math GOALS exam to determine placement in this course. (Pass/No Pass) PREREQ: CASAS Math GOALS Educational Functioning Level (EFL) exam score of 3 or higher. (0 lecture hours, 0 lab hours, 0 credits)

MATH 097 Introductory Prep Math

(3 Credits, Fall/Spring/Summer)

Introductory Prep Math is designed to prepare students for the co-requisite courses of College Algebra Plus (MATH 142 and MATH 143P) and Math for Elementary Teachers I (MATH 157). This course also serves as a prerequisite for Advanced Prep Math (MATH 098). Credit hours are not granted in both MATH 097 and MATH 099. (Pass/No Pass) PREREQ: MATH 085 or satisfactory placement score. (3 lecture hours, 0 lab hours, 3 credits)

MATH 098 Advanced Prep Math

(2 Credits, Fall/Spring/Summer)

Advanced Prep Math is the second course in a two-semester sequence (preceded by MATH 097) designed to prepare students for College Algebra (MATH 143), Math for Elementary Teachers II (MATH 257), and College Algebra and Trigonometry (MATH 147). Credit hours are not granted in both MATH 098 and MATH 099. (Pass/No Pass) PREREQ: MATH 097 or satisfactory placement score. (2 lecture hours, 0 lab hours, 2 credits)

MATH 099 Expanded Prep Math

(5 Credits, Fall/Spring)

Expanded Prep Math is designed to provide an intensive one-semester pathway to prepare students for College Algebra and Trigonometry (MATH 147) and then Calculus I (MATH 170). Credit hours are not granted in both MATH 097 and MATH 099, nor in both MATH 098 and MATH 099. (Pass/No Pass) PREREQ: MATH 085 or satisfactory placement score. (5 lecture hours, 0 lab hours, 5 credits)

MATH 118 Technical Math

(2 Credits, Fall/Spring)

This course provides an opportunity to use problem-solving strategies and dimensional analysis; solve and graph algebraic equations; use ratios, proportions, fractions, and decimals; apply geometric formulas; evaluate and apply trigonometric functions; and apply simple business math concepts. NOTE: Both MATH 118 and MATH 118L must be completed with a grade of D or higher in order to fulfill the GEM 3 Mathematical Ways of Knowing general education requirement. PREREQ: MATH 085 or satisfactory placement score. COREQ: MATH 118L. (This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing when completed with MATH 118L.). (2 lecture hours, 0 lab hours, 2 credits)

MATH 118L Technical Math Lab

(1 Credit, Fall/Spring)

This required lab accompanies MATH 118 and includes the application of the following topics: problem-solving strategies, dimensional analysis, algebraic equations, geometric formulas, ratios, proportions, fractions, and decimals, trigonometric functions, and simple business math. Each section of this lab will be focused on specific applications of the math content. Sections may be restricted to students in a specific major; please refer to the section information at the time of registration to determine proper offering. NOTE: Both MATH 118 and MATH 118L must be completed with a grade of D or higher in order to fulfill the GEM 3 Mathematical Ways of Knowing general education requirement. PREREQ: MATH 085 or satisfactory placement score. COREQ: MATH 118. (This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing when completed with MATH 118.). (0 lecture hours, 3 lab hours, 1 credits)

MATH 122 Math in Modern Society Plus

(2 Credits, Fall/Spring/Summer)

This course provides additional instruction and support for MATH 123 in the form of hands-on work with real-world problems including problem solving strategies, multiple numeration systems, solving and graphing algebraic equations, statistics, probability, and personal finance. PREREQ: Satisfactory placement score (see Math Placement chart in the CWI catalog). COREQ: MATH 123P. (2 lecture hours, 0 lab hours, 2 credits)

MATH 123 Math in Modern Society

(3 Credits, Fall/Spring/Summer)

This survey course provides an opportunity to acquire an appreciation of the nature of mathematics and its relation to other aspects of our culture. The course is rigorous but not rigid and applies mathematics to real-world problems. Topics include deductive and inductive reasoning, personal finance, descriptive and inferential statistics, counting in different bases, problem solving, dimensional analysis, elementary probability, and linear equations and graphing. PREREQ: MATH 085 or satisfactory placement score. (This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.). (3 lecture hours, 0 lab hours, 3 credits)

MATH 123P Math in Modern Society

(3 Credits, Fall/Spring/Summer)

This survey course provides an opportunity to acquire an appreciation of the nature of mathematics and its relation to other aspects of our culture. The course is rigorous but not rigid and applies mathematics to real-world problems. Topics include deductive and inductive reasoning, personal finance, descriptive and inferential statistics, counting in different bases, problem solving, dimensional analysis, elementary probability, and linear equations and graphing. PREREQ: Satisfactory placement score (see Math Placement chart in the CWI catalog). COREQ: MATH 122. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

MATH 130 Finite Mathematics

(4 Credits, Varies)

This course is designed for students pursuing degrees in business, criminal justice, education, nursing, sociology, and related fields. Course topics include functions, linear and nonlinear mathematical models, systems of linear equations, linear programming, matrix algebra and applications, mathematics of finance, elementary probability, and statistics. PREREQ: MATH 098 or MATH 099, or satisfactory placement score. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.)*. (4 lecture hours, 0 lab hours, 4 credits)

MATH 142 Precalculus I: Algebra Plus

(2 Credits, Fall/Spring/Summer)

This course provides additional instruction and support for MATH 143, Precalculus I: Algebra. This course includes fundamental concepts of algebra; equations and inequalities; functions and graphs; polynomial, rational, exponential, and logarithmic functions; systems of equations and inequalities; conics; and the Binomial Theorem. PREREQ: MATH 097 or satisfactory placement score. COREQ: MATH 143P. (2 lecture hours, 0 lab hours, 2 credits)

MATH 143 Precalculus I: Algebra

(3 Credits, Fall/Spring/Summer)

This course includes fundamental concepts of algebra, equations and inequalities, functions and graphs, systems of equations and inequalities, and polynomial, rational, exponential, and logarithmic functions. Credit hours are not granted in both MATH 143 and MATH 147. PREREQ: MATH 098 or MATH 099, or satisfactory placement score. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

MATH 143P Precalculus I: Algebra

(3 Credits, Fall/Spring/Summer)

This course includes fundamental concepts of algebra, equations and inequalities, functions and graphs, systems of equations and inequalities, and polynomial, rational, exponential, and logarithmic functions. Credit hours are not granted in both MATH 143P and MATH 147. PREREQ: MATH 097 or satisfactory placement score. COREQ: MATH 142. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

MATH 144 Precalculus II: Trigonometry

(2 Credits, Fall/Spring/Summer)

This course covers right triangle and circular function approaches to trigonometry, graphs of trigonometry functions, trigonometry identities, conditional equations, right and non-right triangle applications of trigonometry, inverse trigonometry functions, trigonometry of complex numbers, including DeMoivre's Theorem, polar coordinates and equations, and parametric equations. Credit is not awarded in both MATH 144 and MATH 147. PREREQ: MATH 143 with a grade of C or higher, or satisfactory placement score. (2 lecture hours, 0 lab hours, 2 credits)

MATH 147 Precalculus

(5 Credits, Fall/Spring/Summer)

This is a single course equivalent to Precalculus I: Algebra (MATH 143) plus Precalculus II: Trigonometry (MATH 144). This course includes fundamental concepts of algebra and trigonometry; equations and inequalities; functions and graphs; polynomial, rational, exponential, and logarithmic functions; systems of equations and inequalities; right triangle and circular function approaches to trigonometry; graphs of trig functions; trig identities; conditional equations; right and non-right triangle applications of trigonometry; inverse trig functions; trigonometry of complex numbers, including DeMoivre's Theorem; polar coordinates and equations; and parametric equations. Credit hours are not granted in both MATH 143 and MATH 147, nor in both MATH 144 and MATH 147. PREREQ: MATH 098 or MATH 099, or satisfactory placement score. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.)*. (5 lecture hours, 0 lab hours, 5 credits)

MATH 152 Statistical Reasoning Plus

(2 Credits, Fall/Spring/Summer)

This is a statistics course that provides additional instruction and support for MATH 153 in the form of hands-on work with probability and statistics covering descriptive statistics, binomial and normal distribution, confidence intervals, and hypothesis testing using z, t, chi square, and f distributions. Correlation and regression are also introduced. PREREQ: MATH 085 or satisfactory placement score. COREQ: MATH 153P. (2 lecture hours, 0 lab hours, 2 credits)

MATH 153 Statistical Reasoning

(3 Credits, Fall/Spring/Summer)

This algebra-based probability and statistics course covers descriptive statistics, binomial and normal distribution, confidence intervals, and hypothesis testing using z, t, chi square, and f distributions. Correlation and regression are also introduced. PREREQ: MATH 097 or satisfactory placement score. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

MATH 153P Statistical Reasoning

(3 Credits, Fall/Spring/Summer)

This algebra-based probability and statistics course covers descriptive statistics, binomial and normal distribution, confidence intervals, and hypothesis testing using z, t, chi square, and f distributions. Correlation and regression are also introduced. PREREQ: MATH 085 or satisfactory placement score. COREQ: MATH 152. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

MATH 157 Math for Elementary Teachers I

(4 Credits, Fall)

This course includes problem-solving, set theory, numeration systems, integers, number theory, rational numbers, exponents, and real numbers in preparation for a career in the field of education. Although the prerequisite to this course is MATH 097, it is strongly recommended that students also complete MATH 098 (or receive a satisfactory placement score) before or at the same time as taking this course if they plan to continue on to MATH 257. PREREQ: MATH 097 or satisfactory placement score. (4 lecture hours, 0 lab hours, 4 credits)

MATH 160 Survey of Calculus

(4 Credits, Fall/Spring)

This course is designed for students with business, social science, and life science majors. It covers functions, limits, continuity, derivative, maxima-minima, applications of the derivative, exponential and logarithmic functions, functions of several variables, maxima and minima of functions of several variables, integration, and applications of the integral. PREREQ: MATH 143 or MATH 147 with a grade of C or higher, or satisfactory placement score. (This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.). (4 lecture hours, 0 lab hours, 4 credits)

MATH 170 Calculus I

(5 Credits, Fall/Spring/Summer)

This is the first course in the calculus sequence. It covers algebraic and transcendental functions; rate of change; limits; continuity; differentiation of algebraic, trigonometric, exponential, logarithmic, and hyperbolic functions; differentials; applications of differentiation; definite and indefinite integrals; area between curves; volumes; and other applications of integration, indeterminate forms, and L'Hôpital's rule. PREREQ: MATH 147 (or MATH 143 and MATH 144) with a grade of C or higher, or satisfactory placement score. (This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.). (5 lecture hours, 0 lab hours, 5 credits)

MATH 175 Calculus II

(4 Credits, Fall/Spring)

This is the second course in the calculus sequence. It covers techniques of integration, improper integrals, Simpson's Rule, Trapezoid Rule, arc length, surface area, and other applications of integration, direction (slope) fields, parametric equations, polar calculus, conic sections, infinite sequences and series, power series, and Taylor's formula. PREREQ: MATH 170 with a grade of C or higher. (4 lecture hours, 0 lab hours, 4 credits)

MATH 176 Discrete Mathematics

(4 Credits, Fall)

This course is designed to prepare the student for computer science and upper-division mathematics courses. Material covered will include sets, propositions, proofs, functions, relations, equivalence relations, quantifiers, Boolean algebras, graphs, and difference equations. PREREQ: MATH 170 with a grade of C or higher. (4 lecture hours, 0 lab hours, 4 credits)

MATH 230 Introduction to Linear Algebra

(3 Credits, Spring)

This course serves as an introduction to more theoretical mathematics as well as introducing students to tools useful in applied mathematics. Topics include systems of linear equations, matrices, determinants, linear transformations, and vector spaces. PREREQ: MATH 160 or MATH 170 with a grade of C or higher. (3 lecture hours, 0 lab hours, 3 credits)

MATH 257 Math for Elementary Teachers II

(4 Credits, Spring)

This course includes algebraic reasoning, functions, probability, introductory statistics, geometry, and concepts of measurement in preparation for a career in the field of education. PREREQ: MATH 098 or MATH 099, or satisfactory placement score; and MATH 157 with a grade of C or higher. (This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 3 - Mathematical Ways of Knowing.). (4 lecture hours, 0 lab hours, 4 credits)

MATH 275 Calculus III

(4 Credits, Fall/Spring)

This is the final course in the calculus sequence. Topics include vectors, functions of several variables, multiple integration, parametric surfaces, vector fields, and 3D vector algebra. Applications involve the Fundamental Theorem of Line Integrals, Green's Theorem, the Divergence Theorem, and Stokes Theorem. PREREQ: MATH 175 with a grade of C or higher. (4 lecture hours, 0 lab hours, 4 credits)

MATH 285 Differential Equations with Matrix Theory

(4 Credits, Fall)

This course focuses on techniques for solving differential equations and solving systems of differential equations which model phenomena in the sciences and engineering. Topics include analytic, qualitative, and numerical techniques, linear and nonlinear systems of differential equations, Laplace transforms, and matrix methods for linear systems. PREREQ: MATH 175 with a grade of C or higher. (4 lecture hours, 0 lab hours, 4 credits)

MATH 293 Mathematics Internship

(1-3 Credits, Varies)

Internships allow students to apply learning to real-life career possibilities. Credits are earned through supervised fieldwork specifically related to a student's area of study. PREREQ: PERM/INST. (0 lecture hours, 3 lab hours, 1 credits)

MATH 296 Mathematics Independent Study

(1-10 Credits, Varies)

This is a term long project. Each credit hour is equivalent to 45 hours of work on a project. Students should make arrangements with the instructor in their field of interest. Before enrolling for independent study, a student must obtain approval of the department chair and dean, acting on the recommendation of the instructor who will be supervising the independent study. An Independent Study Registration Form must be completed and turned into a One Stop Student Services location before a student may register for this course. PREREQ: PERM/INST and submission of a completed Independent Study Registration Form. (0 lecture hours, 0 lab hours, 1 credits)

Refer to How to Read Course Descriptions for an explanation of elements found in the course descriptions above.