

Mathematics

MATH 040

Pre-Algebra • 5.0 Credits

This introductory course includes computations with integers, fractions, and decimals, prime factorization, algebraic symbols and operations including integer exponents, square roots and inequalities, order of operations, percent, ratios and proportions, translating sentences into mathematical expressions, problem solving strategies, properties of standard geometric objects, and linear equations.

MATH 048

Math for Technical Applications Support • 2.0 Credits

Designed as a corequisite course for any student taking MATH 100 that does not meet the prerequisite requirements. This course will run concurrently with MATH 100 and provide the tools and concepts necessary for students to participate in MATH 100. Topics include whole numbers, decimals, fractions, basic proportions and percentages, real numbers, and basic algebra concepts. **Prerequisite: concurrent enrollment in MATH 100.**

MATH 050

Quantitative Literacy • 5.0 Credits

This course is designed to engage students in complex and realistic situations involving the mathematics of quantity, change and relationships, spatial reasoning, geometric investigations, probability and statistics. Intermediate algebra topics include linear and nonlinear models, ratios, proportions, percents and dimensional analysis. Note that this course will not satisfy the intermediate algebra requirement of the University of Washington. **Prerequisite: grade of 2.0 or better in MATH 040, 084, 096 or 097 or STAT 091 or satisfactory placement test score.**

MATH 060

Algebra I • 5.0 Credits

This course includes linear equations and applications, linear inequalities, compound linear inequalities, absolute value equations and inequalities, graphing linear equations in two variables, slope and intercepts, finding the equation of a line, functions and relations, graphs of basic functions, systems of linear equations in two variables, systems of inequalities in two variables, adding and subtracting polynomials, polynomial multiplication and division. **Prerequisite: grade of 2.5 or better in MATH 040 or grade of 2.0 or better in MATH 084 or satisfactory placement test score.**

MATH 062

Algebra I Supported • 7.0 Credits

This course includes linear equations and applications, linear inequalities, compound linear inequalities, absolute value equations and inequalities, graphing linear equations in two variables, slope and intercepts, finding the equation of a line, functions and relations, graphs of basic functions, systems of linear equations in two variables, systems of inequalities in two variables, adding and subtracting polynomials, polynomial multiplication and division. Additional two hours per week of the course will provide review for essential prerequisite material. **Prerequisite: grade of 2.0 or better in MATH 040 or MATH 084 or satisfactory placement test score.**

MATH 070

Algebra II • 5.0 Credits

This course includes factoring polynomials and solving polynomial equations, rational expressions, complex fractions, rational equations and inequalities, radical expressions, simplifying expressions with radicals and rational exponents, radical equations and functions, complex numbers, methods for solving quadratic equations and applications, exponential and logarithmic properties and equations. **Prerequisite: grade of 2.5 or**

better in MATH 060 or MATH 062 or grade of 2.0 or better in MATH 097 or satisfactory placement test score.

MATH 072

Algebra II Supported • 7.0 Credits

This course includes factoring polynomials and solving polynomial equations, rational expressions, complex fractions, rational equations and inequalities, radical expressions, simplifying expressions with radicals and rational exponents, radical equations and functions, complex numbers, methods for solving quadratic equations and applications, exponential and logarithmic properties and equations. Additional two hours per week of the course will provide review for essential prerequisite material. **Prerequisite: grade of 2.0 or better in MATH 060 or MATH 062 or MATH 096 or MATH 097 or satisfactory placement test score.**

MATH 092

Special Topics in Mathematics • 1.0–10.0 Credits

This course is designed to give special mathematical topics to those students whose needs are not met with the existing curriculum.

MATH 100

Algebraic Tools for Vocational Application • 5.0 Credits

Formerly MTH 100

Designed to introduce the student to the tools and concepts necessary to solve mathematical problems applicable to the student's trade. Topics include ratios and proportions, percentages, measurement, applying formulas, basic algebra concepts, geometry, and basic triangle trigonometry. **Prerequisite: appropriate placement or concurrent enrollment in MATH 048.**

MATH 106

Business Mathematics • 5.0 Credits

Formerly MTH 106

Mathematical concepts used in business such as interest, annuities, mortgages, investments, and taxes. Required by some majors for the AAS degree; does not satisfy math requirement for AA degree. **Prerequisite: MATH 084 with a grade of 2.0 or better, or MATH 084 with a grade of P if taken before spring 2016, or MATH 050 with a grade of 2.0 or better or satisfactory placement test score.**

MATH&107

Math in Society [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 130, MTH 110

This course is designed for students who have successfully completed intermediate algebra coursework. This course will introduce students to mathematical applications in a variety of disciplines and will satisfy the quantitative/symbolic reasoning requirement for the AA degree. **Prerequisite: MATH 094 or MATH 095 or MATH 098 or MATH 050 or MATH 070 (or MATH 072) with a grade of 2.0 or better or satisfactory placement test score.**

MATH 108

Math for Early Childhood Education • 5.0 Credits

Formerly MTH 108

An elementary introduction to problem-solving, fractions and decimals, probability and statistics, geometry and measurement, and functions and graphs. Intended for early childhood and para education majors only. **Prerequisite: MATH 084 with a grade of 2.0 or better, or MATH 084 with a grade of P if taken before spring 2016, or MATH 040 with a grade of 2.0 or better or satisfactory placement test score.**

Mathematics

MATH 113

Geometry/Trigonometry [M/S] • 5.0 Credits

Formerly MTH 113, MTH 103

Areas and volumes of basic geometric figures, approximations, ratio and proportions, literal equations, scientific notation, vectors, logarithms, complex numbers, trigonometric functions, and graphs of trigonometric functions. Recommended for students intending to take PHYS& 114.

Prerequisite: MATH 095 or MATH 098 or MATH 070 (or MATH 072) with a grade of 2.0 or better or satisfactory test placement.

MATH&141

Precalculus I [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 104, MTH 154

Designed to prepare students for entry into basic calculus. Precalculus I together with Precalculus II is designed to prepare students for entry into the calculus sequence: MATH& 151, MATH& 152, MATH& 153, and MATH& 254. The topics include: absolute value, complex numbers, linear and quadratic equations, rational, polynomial, exponential and logarithmic functions, inverse functions, theory of equations, and sequences and series. **Prerequisite: grade of 2.0 or better in MATH 070 or MATH 072 or MATH 095 or MATH 098 or satisfactory placement test score.**

MATH&142

Precalculus II [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 155, MTH 105

Precalculus II is the second quarter of the precalculus sequence. Precalculus II is predominantly trigonometry. The topics include trigonometric functions and their inverses, solving triangles, circular functions, identities, conditional equations, complex numbers in polar form, conic sections, parametric and polar equations, systems of equations, matrices and determinants, and vectors. **Prerequisite: grade of 2.0 or better in MATH& 141, or appropriate placement. Students completing MATH& 142 may not receive graduation credit for MATH& 144.**

MATH&144

Precalculus I & II [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 107, MTH 157

Precalculus I & II is a condensed, accelerated combination of Precalculus I and Precalculus II. Selected topics from Precalculus I and Precalculus II are covered in one quarter, allowing the better prepared student to complete the precalculus preparation in one quarter rather than two. The topics include polynomial, rational, logarithmic, and circular functions. Also, analytic geometry, complex numbers, vectors, and sequences and series. **Prerequisite: appropriate placement or instructor permission. Students completing MATH& 144 may not receive graduation credit for MATH& 141 and/or MATH& 142.**

MATH&146

Introduction to Stats [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 143

A course especially suited for the non-physical science major such as business, medical professionals, behavioral sciences, computer science, etc. A study of both descriptive and inferential statistics, including: measures of central tendency, random variables, probability, probability distributions, sampling methods, confidence intervals, hypothesis testing, estimation, linear regression, and correlation. **Prerequisite: STAT 092 or MATH 094 or MATH 095 or MATH 098 or MATH 050 or MATH 070 (or MATH 072) with a grade of 2.0 or better or satisfactory placement test score.**

MATH 147

Finite Math [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 147, MTH 200

A course especially suited for students in behavioral, managerial, and social sciences. Topics include: matrices, systems of linear equations and inequalities, finance, probability and counting techniques, exponential, and logarithmic functions. **Prerequisite: MATH 095 or MATH 098 or MATH 070 (or MATH 072) with a grade of 2.0 or better or satisfactory placement test score.**

MATH&148

Business Calculus [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 210

Designed for non-physical science majors such as business, management, behavioral science, and social science. Topics include: relations, functions, exponential and logarithmic functions, derivatives and their applications, integrals and their applications, and functions of several variables. **Prerequisite: grade of 2.0 or better in MATH 070 or MATH 072 or MATH 147 or satisfactory placement test score. Suggested prerequisite: MATH& 141.**

MATH&151

Calculus I [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 231, MTH 201

The first course in the sequence for students whose major field of study requires a full year of calculus. Topics include: limits of algebraic and trigonometric expressions and exponential and logarithm functions; the derivatives of algebraic, trigonometric functions, and their inverses; exponential and logarithm functions; hyperbolic functions and their inverses; applications of the derivative, and an introduction to antiderivatives and the definite and indefinite integral. **Prerequisite: grade of 2.0 or better in MATH& 141 and MATH& 142 or MATH& 144, or appropriate placement.**

MATH&152

Calculus II [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 202, MTH 232

A continuation of MATH& 151. Topics include: the fundamental theorem of calculus; techniques of integration; trigonometric integrals and substitution; applications of the definite integral including areas, average values, and volumes; improper integrals; and parametric equations, polar coordinates, arc length, and surface area with polar functions. **Prerequisite: grade of 2.0 or better in MATH& 151 or equivalent.**

MATH&153

Calculus III [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 233, MTH 203

A continuation of MATH& 152. Topics include: infinite sequences and series; MacLaurin, Taylor, and power series; conic sections, vectors, and the calculus of vector functions in two and three dimensions with applications. **Prerequisite: grade of 2.0 or better in MATH& 152 or equivalent.**

MATH&171

Math for Elementary Education I [M/S] • 5.0 Credits

Formerly MATH 121

An introduction to problem-solving principles and strategies, sets and logic, numeration systems, properties of the real number system and its subsystems, and applications of mathematics. Primarily for elementary education majors. **Prerequisite: a grade of 2.0 or better in MATH 070 or MATH 072 or MATH 095 or MATH 098 or satisfactory placement test score.**

Mathematics

MATH&172

Math for Elementary Education II [M/S] [Q/SR] • 5.0 Credits

Formerly MATH 122

An informal approach to the basic ideas of geometry; including construction, congruence and similarity, transformations, symmetry, measurement, and coordinate geometry. This course satisfies the quantitative skills requirement for the AA degree, provided that MATH& 171 (previously MATH 121) has also been successfully completed.

Prerequisite: grade of 2.0 or better in MATH& 171.

MATH&173

Math for Elementary Education III [M/S] [Q/SR] • 5.0 Credits

Formerly MATH 123

An elementary introduction to algebraic reasoning, probability, and statistics. Primarily for elementary education majors. This course satisfies the quantitative skills requirement for the AA degree, provided that MATH& 171 (previously MATH 121) has been successfully completed.

Prerequisite: grade of 2.0 or better in MATH& 171.

MATH 199

Special Studies • 1.0–15.0 Credits

A class used to explore new coursework.

MATH 243

Linear Algebra [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 243, MTH 213

Designed for physical science majors in fields such as mathematics, engineering, and physics. Topics include vectors, matrices and determinants, lines and planes in 3-space, linear systems, vector spaces, linear transformations, eigenvalues, and eigenvectors. **Prerequisite:**

grade of 2.0 or better in MATH& 151.

MATH 246

Discrete Structures [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 216, MTH 246

An introduction to discrete mathematics, trees, graphs, elementary logic, and combinatorics with applications to computer science. **Prerequisite:**

grade of 2.0 or better in MATH& 141. A knowledge of computers, programming, and calculus is beneficial but is not required.

MATH&254

Calculus IV [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 204, MTH 234

An introduction to the calculus applied to functions of two or three variables. Topics include: functions of several variables, partial derivatives, directional derivatives, multiple integration, integration using cylindrical and spherical coordinates, vector fields, line integrals, surfaces and surface integrals, Green's Theorem, Stoke's Theorem, and the Divergence Theorem. **Prerequisite: grade of 2.0 or better in MATH& 153 or equivalent.**

MATH 255

Differential Equations [M/S] [Q/SR] • 5.0 Credits

Formerly MTH 254

Beginning course in differential equations. Topics include first order methods, linear differential operators, Laplace transforms, series methods, and numerical techniques. **Prerequisite: MATH& 153 or equivalent.**

MATH& 153 may be taken concurrently.

MATH 299

Special Studies • 1.0–15.0 Credits

A class used to explore new coursework.