

Fourth Math Course Options

Course ID	Course Name	Long Course Description	Min Grd	Max Grd
0327	AP Computer Science A*	AP Computer Science A - Grades 9-12 - AP Computer Science A course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object oriented and imperative problem solving and design. These techniques represent proven approaches for developing solutions that can scale from small, simple problems to large, complex problems. This course is intended to prepare students for the optional Advanced Placement Exam in this subject and should follow the published College Board guidelines.	09	12
0336	AP Computer Science Principles*	AP Computer Science Principles - Grades 9-12 - AP Computer Science Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, this course prepares students for college and career. It is intended to prepare students for the optional Advanced Placement Exam in this subject and should follow the published College Board guidelines.	09	12
0345	AP PLTW Computer Science Principles (CSP)*	PLTW Computer Science Principles - Grades 9-12 - Using Python as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. While this course can be a student's first in computer science, students without prior computing experience are encouraged to start with Computer Science Essentials. Projects and problems include app development, visualization of data, cybersecurity, and simulation. The course curriculum and professional development is endorsed by the College Board. This course serves as the beginning course for PLTW Computer Science (A Project Lead the Way course).	09	12
0346	AP PLTW Computer Science A*	PLTW Computer Science A- Grades 9-12 - This course focuses on further developing computational thinking skills through the medium of Android App development for mobile platforms. The course utilizes industry-standard tools such as Android Studio, Java programming language, XML, and device emulators. Students collaborate to create original solutions to problems of their own choosing by designing and implementing user interfaces and Web-based databases. This course aligns with the AP CS A course. This course is sequenced after PLTW Computer Science Principles 0345 (A Project Lead the Way course).	09	12
2024	Applied Math	Applied Math - Grades 9 - 12 - This course aligns to the high school standards for Mathematics I or Algebra I and Geometry with an emphasis on application in a contextual environment. The fundamental purpose of this course is to extend the mathematics that students learned in Mathematics I or Algebra I and Geometry through applications. This course should allow the students to apply the concepts learned in Mathematics I or Algebra I and Geometry and should not be the first time students learn these concepts. The critical areas deepen and extend understanding of linear and exponential relationships through analyzing, solving, and using quadratic functions. The course expands and explores more complex geometric situations and geometric relationships. The Standards for Mathematical Practice are interwoven with the content standards throughout the course, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.	09	12

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2029	Probability and Statistics	<p>Probability and Statistics - Grades 9 -12 - This course aligns to the Probability and Statistics standards. The focus is to apply and expand understanding of Probability and Statistics. Four critical areas addressed in the course include: 1. Interpret categorical and quantitative data by: summarizing, representing, and interpreting data on a single count, measurement, two categorical or quantitative variables or linear models; 2. Make inferences and justify conclusions by understanding and evaluating random processes underlying statistical experiments, make inferences and justify conclusions from sample surveys, experiments and observations studies; 3. Apply conditional probability and probability rules by understanding independence and conditional probability; and interpreting data using rules of probability to compute probabilities of compound events; 4. Apply probability to make decisions by calculating expected values and using them to solve problems; using probability to evaluate outcomes of decisions. NM Common Core State Standards Mathematics-S.ID.1, S.ID.2, S.ID.3, S.ID.4, S.ID.5, S.ID.6, S.ID.7, S.ID.8, S.ID.9, S.IC.1, S.IC.2, S.IC.3, S.IC. 4, S.IC.5, S.IC.6, S.CP.1, S.CP.2, S.CP.3, S.CP.4, S.CP.5, S.CP.6, S.CP.7, S.CP.8, S.CP.9, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5, S.MD.6, S.MD.7 NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8</p>	09	12
2039	Fractal Mathematics*	<p>Fractal Mathematics - Grades 9 - 12 - This course is higher than the level of Algebra II. This course develops computational thinking skills and utilizes mathematical tools to model fractal geometry in the environment using algebra, geometry, functions, and writing and solving algebraic expressions. This course includes projects where students use computational thinking skills such as pattern matching, algorithms, abstraction, and decomposition, to design and develop fractals using computer modeling. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8</p>	09	12
2043	Trigonometry	<p>Trigonometry - Grades 10 - 12 - This course is higher than the level of Algebra II. Course prepares students for eventual work in calculus and include the study the following topics: trigonometric and circular functions; their inverses and graphs; relations among the parts of a triangle; trigonometric identities and equations; solutions of right and oblique triangles; and complex numbers. Enhancement topics: vectors, graphing in the polar coordinate system, and matrix algebra. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8</p>	10	12

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2044	Algebra II/Trigonometry	<p>Algebra II - Grades 10 - 12 - This course aligns to Algebra II and higher for students who have attained Algebra I and Geometry objectives. Topics addressed: field properties and theorems; set theory; operations with rational and irrational expressions; factoring rational expressions; in depth study of linear equations and inequalities; quadratic equations; solving systems of linear and quadratic equations; graphing of constant, linear, and quadratic equations; properties of higher degree equations; operations with rational and irrational exponents; right trigonometric and circular functions, inverses, and graphs; trigonometric identities and equations; solutions of right and oblique triangles; complex numbers; and numerical tables. Review topics from Algebra 1 and Geometry. Enhancement topics: polynomial, logarithmic and exponential functions and graphs; conic sections; vectors; graphing in polar coordinate system; elementary probability and statistics; matrices; determinants; and sequences and series. NM Common Core State Standards Mathematics-N.CN.1, N.CN.2, N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.CN.7, N.CN.8, N.CN.9, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.SSE.1, A.SSE.2, A.SSE.4, A.APR.1, A.APR.2, A.APR.3, A.APR.4, A.APR.5, A.APR.6, A.APR.7, A.CED.1, A.CED.2, A.CED.3, A.CED.4, A.REI.2, A.REI.8, A.REI.9, A.REI.11, F.IF.4, F.IF.5, F.IF.6, F.IF.7b, F.IF.7c, F.IF.7d, F.IF.7e, F.IF.8, F.IF.9, F.BF.1b, F.BF.1c, F.BF.3, F.BF.4a, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.LE.4, F.TF.1, F.TF.2, F.TF.3, F.TF.4, F.TF.5, F.TF.6, F.TF.7, F.TF.8, F.TF.9, G.GPE.3, G.GMD.2, S.ID.4, S.IC.1, S.IC.2, S.IC.3, S.IC.4, S.IC.5, S.IC.6S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b, S.MD.6, S.MD.7</p> <p>NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8</p>	10	12
2045	Elementary Functions	<p>Elementary Functions - Grades 10 - 12 - This course is higher than the level of Algebra II. Course, while preparing students for eventual work in calculus, include the study of relations and functions, including polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their inverses, graphs, and applications. Review topics: structure of the real number system. Enhancement topics: statistical and probability functions. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8</p>	10	12
2047	Math Analysis	<p>Math Analysis - Grades 10 - 12 - This course is higher than the level of Algebra II. Course includes the study of polynomial, logarithmic, exponential, and rational functions and their graphs; vectors; set theory; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity. Review topics: right trigonometric and circular functions and their graphs, and other trigonometry topics. Enhancement topics: elementary probability and statistics, derivatives, and integrals. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8</p>	10	12
2048	Trigonometry/Analytic Geometry	<p>Trigonometry/Analytic Geometry - Grades 9 - 12 - This course aligns to the geometry standards and is higher than the level of Algebra II. Course covering the topics of both Trigonometry and Analytic Geometry, these courses prepare students for eventual work in calculus. Topics include the study of right trigonometric and circular functions, inverses, and graphs; trigonometric identities and equations; solutions of right and oblique triangles; complex numbers; numerical tables; vectors; the polar coordinate system; equations and graphs of conic sections; rotations and transformations; and parametric equations. Review topics: solutions of linear and quadratic equations. Enhancement topics: polynomial, logarithmic, exponential, and rational functions and their graphs; matrix algebra; and analytic geometry of solids. NM Common Core State Standards Mathematics-G.CO.1, G.CO.2, G.CO.3, G.CO.4, G.CO.5, G.CO.6, G.CO.7, G.CO.8, G.CO.9, G.CO.10, G.CO.11, G.CO.12, G.CO.13, G.SRT.1, G.SRT.2, G.SRT.3, G.SRT.4, G.SRT.5, G.SRT.6., G.SRT.7, G.SRT.8, G.SRT.9, G.SRT.10, G.SRT.11, G.C.1, G.C.2, G.C.3, G.C.4, G.C.5, G.GPE.1, G.GPE.2, G.GPE.4, G.GPE.5, G.GPE.6, G.GPE.7, G.GMD.1, G.GMD.3, G.GMD.4, G.MG.1, G.MG.2, G.MG.3, S.CP.1, S.CP.2, S.CP.3, S.CP.4, S.CP.5, S.CP.6, S.CP.7, S.CP.8, S.CP.9, S.MD.6, S.MD.7</p> <p>NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8</p>	09	12

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2049	Trigonometry/Math Analysis	Trigonometry/Math Analysis - Grades 9 - 12 - This course is higher than the level of Algebra II. Course covering the topics of both Trigonometry and Math Analysis, these courses prepare students for eventual work in calculus. Topics include the study of right trigonometric and circular functions, inverses, and graphs; trigonometric identities and equations; solutions of right and oblique triangles; complex numbers; numerical tables; polynomial, logarithmic, exponential, and rational functions and their graphs; vectors; set theory; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity. Enhancement topics: elementary probability and statistics, derivatives, and integrals. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	09	12
2050	Analytic Geometry/Math Analysis	Analytic Geometry/Math Analysis - Grades 9 - 12 - This course is higher than the level of Algebra II. Course covering the topics from both Analytic Geometry and Math Analysis, these courses prepare students for eventual work in calculus. Topics include the study of polynomial, logarithmic, exponential, and rational functions and their graphs; vectors; the polar coordinate system; equations and graphs of conic sections; rotations and transformations; parametric equations; set theory; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity. Review topics: solutions of linear and quadratic equations and systems of these equations, right trigonometric and circular functions and their graphs, and other trigonometry topics. Enhancement topics: analytic geometry of solids, elementary probability and statistics, derivatives, and integrals. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8.	09	12
2053	Pre-Calculus	Pre-Calculus - Grades 10 - 12 - This course is higher than the level of Algebra II. Course combines the study of Trigonometry, Elementary Functions, Analytic Geometry, and Math Analysis topics as preparation for calculus. Topics include the study of complex numbers; polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their relations, inverses and graphs; trigonometric identities and equations; solutions of right and oblique triangles; vectors; the polar coordinate system; conic sections; Boolean algebra and symbolic logic; mathematical induction; matrix algebra; sequences and series; and limits and continuity. Review topics: structure of the real number system, solutions of linear and quadratic equations and systems of these equations. Enhancement topics: elementary probability and statistics, derivatives, and integrals. Refer to course code 2076 for standards. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	10	12
2054	Discrete Mathematics	Discrete Mathematics - Grades 9 - 12 - This course is higher than the level of Algebra II. Course designed for students who have attained Algebra II objectives, Discrete Mathematics topics include the study of polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions and relations and their graphs; set theory; symbolic logic; Boolean algebra; combinatorics; recursion; basic algebraic structures; and graph theory. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	09	12

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2055	Calculus	Calculus - Grades 11 - 12 - This course is higher than the level of Algebra II. Course intended for students who have attained pre-calculus objectives, including some combination of Trigonometry, Elementary Functions, Analytic Geometry, and Math Analysis, or Pre-Calculus. They include the study of derivatives, anti-derivatives, differentiation, integration, the definite and indefinite integral, and applications of calculus. Review topics: properties of elementary functions and their graphs, vectors and polar coordinates, and concepts of limits and continuity. Enhancement topics: improper integral; multiple integration; sequences and series, including convergence tests and series expansion theorems; anti-differentiation; and differential equations. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	11	12
2056	Multivariate Calculus	Multivariate Calculus - Grades 11 - 12 - This course is higher than the level of Algebra II. Course includes the study of hyperbolic functions, improper integrals, directional derivatives, and multiple integration and its applications. Enhancement topics: differential forms and vector calculus. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	11	12
2057	Differential Calculus	Differential Equations - Grades 11 - 12 - This course is higher than the level of Algebra II. Course includes the study of elementary differential equations including first and higher order differential equations, partial differential equations, linear equations, systems of linear equations, transformations, series solutions, numerical methods, boundary value problems, and existence theorems. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	11	12
2058	AP Calculus AB	AP Calculus AB - Grades 11 - 12 - This course is higher than the level of Algebra II. AP Calculus AB provides students with an intuitive understanding of the concepts of calculus and experience with its methods and applications. These courses introduce calculus and include the following topics: elementary functions; properties of functions and their graphs; limits and continuity; differential calculus (including definition of the derivative, derivative formulas, theorems about derivatives, geometric applications, optimization problems, and rate of change problems); and integral calculus (including anti-derivatives and the definite integral). This course is intended to prepare students for the optional Advanced Placement Exam in this subject and should follow the published College Board guidelines. Addresses AP standards.	11	12
2059	AP Calculus BC	AP Calculus BC - Grades 11 - 12 - This course is higher than the level of Algebra II. Course provides students with an intuitive understanding of the concepts of calculus and experience with its methods and applications, and also requires additional knowledge of the theoretical tools of calculus. These courses assume a thorough knowledge of elementary functions, and cover all of the calculus topics in AP Calculus AB as well as the following topics: vector functions, parametric equations, and polar coordinates; rigorous definitions of finite and nonexistent limits; derivatives of vector functions and parametrically defined functions; advanced techniques of integration and advanced applications of the definite integral; and sequences and series. This course is intended to prepare students for the optional Advanced Placement Exam in this subject and should follow the published College Board guidelines. Addresses AP standards.	11	12

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2060	AP Statistics	AP Statistics - Grades 11 - 12 - This course is higher than the level of Algebra II. AP Statistics introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data (observing patterns and departures from patterns), planning a study (deciding what and how to measure), anticipating patterns (producing models using probability theory and simulation), and statistical inference (confirming models). This course is intended to prepare students for the optional Advanced Placement Exam in this subject and should follow the published College Board guidelines. Addresses AP standards.	11	12
2073	Number Theory-Algebra II Level	Number Theory - Grades 11 - 12 - This course is higher than the level of Algebra II. Course intended for students who have attained the objectives of Algebra II, Number Theory-Algebra II level courses review the properties and uses of integers and prime numbers, and extend this information to congruencies and divisibility. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	11	12
2074	Abstract Algebra-Pre Calculus	Abstract Algebra - Pre Calculus level - Grades 11 - 12 - This course is higher than the level of Algebra II. Course intended for students who have attained pre-calculus objectives, Abstract Algebra-Pre Calculus level courses include a study of the properties of the number system from an abstract perspective, including such topics as number fields (i.e., rational, real, and complex numbers), integral domains, rings, groups, polynomials, and the fundamental theorem of algebra. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	11	12
2075	Linear Algebra-Pre Calculus	Linear Algebra - Pre Calculus level - Grades 11 - 12 - This course is higher than the level of Algebra II. Course intended for students who have attained pre-calculus objectives, Linear Algebra-Pre Calculus level courses include a study of matrices, vectors, tensors, and linear transformations. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	11	12
2076	Linear Programming-PreCalculus	Linear Programming - Pre Calculus level - Grades 11 - 12 - This course is higher than the level of Algebra II. Course intended for students who have attained pre-calculus objectives, Linear Programming-Pre Calculus level courses include a study of mathematical modeling and the simplex method to solve linear inequalities. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	11	12
2078	Mathematical Modeling	Mathematical Modeling - Grades 10 - 12 - This course is higher than the level of Algebra II. This is a project based course using emergent technologies to give students hands on experience exploring mathematical modeling and processes. Students will create an independent research project to address real world situations including using robotics, supercomputing, 3D modeling or other techniques. Students may present their projects and/or compete in robotics, supercomputing or other competitions. Licensure Requirements are the same as course code 2053. NM Common Core State Standards Mathematics- N.Q.1-3. A-SSE(1,3,4). A-CED(1-4). A-REI.11. F-IF(4-7). F-BF(1-2). F.LE(1û5). F-TF(5,7). G-SRT.8. G.GPE.7. G.GMD.3. G.MG(1û3). S-ID(1û9). S-IC(1û6). S-CP(1-9). S-MD(1-7)	10	12

Fourth Math Course Options

2077	SREB Math Ready	SREB Math Ready – Grade 12 – Pre-requisite: either the course series of Algebra I, Geometry and Algebra II or the course series of Integrated Pathway: Mathematics I, II and III. This course is higher than the level of Algebra II. This Southern Regional Educational Board (SREB) course emphasizes an understanding of math concepts. Math Ready students learn the context behind procedures and come to understand the “whys” of using certain formulas or methods to solve a problem. By engaging students in real-world applications, this course develops critical thinking skills that students will use in college and careers. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	12	12
2083	Integrated Math 4 12th	Integrated Pathway: Mathematics IV - Grade 12- This course is higher than the level of Algebra II and may include topics in pre-calculus, trigonometry, math analysis and/or calculus. This course is for students who have successfully attained the standards and seek an integrated approach to further study of mathematics. NM Common Core State Standards Mathematics-N.CN.3, N.CN.4, N.CN.5, N.CN.6, N.VM.1, N.VM.2, N.VM.3, N.VM.4, N.VM.5, N.VM.6, N.VM.7, N.VM.8, N.VM.9, N.VM.10, N.VM.11, N.VM.12, A.REI.8, A.REI.9, F.IF.7d, F.BF.1c, F.BF.4b, F.BF.4c, F.BF.4d, F.BF.5, F.TF.3, F.TF.4, F.TF.6, F.TF.7, F.TF.9, G.GPE.3, G.GMD.2, S.MD.1, S.MD.2, S.MD.3, S.MD.4, S.MD.5a, S.MD.5b. NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8 **only available to students who have completed Integrated Math I, II, III.	12	12
2096	Mathematics-Independent Study	Mathematics - Independent Study - Grades 9 - 12 - This course is higher than the level of Algebra II. Course, often conducted with instructors as mentors, enables students to explore mathematics topics of interest. These courses may be offered in conjunction with other rigorous math courses, or may serve as an opportunity to explore a topic of special interest. They may also serve as an opportunity to study for AP exams if the school does not offer specific courses for that endeavor. Addresses Relevant NM Common Core State Standards for Mathematics; NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	09	12
2097	Financial Literacy-Math	Financial Literacy - Math - Grades 9 -12 - This course provides an understanding of the topics of finance while reinforcing concepts and skills in the high school mathematics standards. This course aligns to at least the Algebra I standards. The finance topics may include: income and careers; money management; credit and debt; and savings and investing. Topic sections cover: personal income, business ownership; budget; taxes; insurance; credit cards; buying verses leasing, mortgages; rent; credit ratings; bankruptcy, bank and brokerage accounts; interest rates; stocks and bonds; retirement; pensions; inheritance; and government financing. The Standards for Mathematical Practice apply throughout this course and, together with the content standards, prescribe mathematics as a coherent, useful, and logical subject that makes sense of problem situations. Addresses Relevant Algebra 1 NM Common Core State Standards for Mathematics. Refer to Course Code 2096 for standards.	09	12
2099	Mathematics-Other	Mathematics - Recommended for Students Grades 5 - 12 - This course code is to be used for college level courses which are not listed above. It may also be used for middle school students if an appropriate MATH course code is unavailable. Typically used with advanced dual credit topics. Addresses Relevant NM Common Core State Standards for Mathematics; NM Common Core State Standards for Mathematical Practice-MP 1, MP 2, MP3, MP 4, MP 5, MP 6, MP 7, MP 8	05	12
*Note: Students who have demonstrated proficiency on the Grade 11 state summative math assessment, may utilize a qualifying computer science course to earn a mathematics graduation credit.				

