

Course Catalog 2022-2023

Student Name: _____ Student ID #: _____ Grade Level: _____
 Parent Name: _____ Parent E-mail: _____

Select Your Endorsement				
<input type="checkbox"/> STEM <input type="checkbox"/> Business & Industry <input type="checkbox"/> Public Service <input type="checkbox"/> Arts & Humanities <input type="checkbox"/> Multidisciplinary Studies				
Subject	Grade 9	Grade 10	Grade 11	Grade 12
English <i>(4 Credits)</i> *English I-II-III-IV or Advanced English Course	English I English I Honors	English II English II Honors	English III AP English Language AP/D English Language	College Prep: English <u>OR</u> English IV <u>OR</u> English IV-D <u>OR</u> AP English Literature <u>OR</u> AP/D English Literature <u>OR</u> AP English Language <u>OR</u> AP/D English Language Creative Writing Humanities (New)
Math <i>(4 Credits)</i> *Algebra I, Geometry, Algebra II and 1 Credit Advanced Math Course ** (Algebra II required for STEM. Algebra II is also required for Distinguished Level of Achievement and for consideration of automatic college admission for top 10%)	Algebra I <u>OR</u> Algebra I Honors <u>OR</u> Geometry Honors <u>OR</u> Algebra II Honors* *Students who completed Algebra I in middle school should select Geometry in their 9 th grade year. *Students who completed Geometry over summer should select Algebra II or Algebra II Honors in their 9 th grade year.	Geometry <u>OR</u> Geometry Honors <u>OR</u> Algebra II Honors* <u>OR</u> Pre-Calculus Honors <u>OR</u> Pre-Calculus-D (CA 1 st Sem)/ Pre-Calculus-D (TR 2 nd Sem)	Algebra II** <u>OR</u> Algebra II Honors <u>OR</u> AP Computer Science A <u>OR</u> Pre-Calculus Honors <u>OR</u> Pre-Calculus-D <u>OR</u> AP Calculus AB <u>OR</u> AP Statistics <u>OR</u> Statistics <u>OR</u> Statistics-D <u>OR</u> Digital Electronics Path College Career-I	Algebra II <u>OR</u> Algebraic Reasoning <u>OR</u> Algebra II Honors <u>OR</u> Pre-Calculus Honors <u>OR</u> Pre-Calculus-D <u>OR</u> Statistics <u>OR</u> Statistics-D <u>OR</u> AP Statistics AP <u>OR</u> College Prep: Math <u>OR</u> Digital Electronics <u>OR</u> AP Calculus AB <u>OR</u> AP Calculus BC <u>OR</u> AP Computer Science A <u>OR</u> Ind. Study in Math (Calculus I) Path College Career-II
Social Studies <i>(4 Credits)</i> *World Geography, World History, US History, and US Government, Economics,	World Geography <u>OR</u> AP Human Geography	World History <u>OR</u> AP World History <u>OR</u>	U.S History <u>OR</u> AP U.S History <u>OR</u>	U.S Gov./ Econ. <u>OR</u> U.S Gov.-D/ Econ-D <u>OR</u> AP US Government (Closed) <u>OR</u> Personal Financial Literacy
Science <i>(4 Credits)</i> *Biology, Chemistry, Physics, and 1 Credit Science Course	Biology <u>OR</u> Biology Honors	Chemistry <u>OR</u> Chemistry Honors <u>OR</u> Physics <u>OR</u> Physics Honors <u>OR</u> Physics D <u>OR</u> AP Biology*	Physics <u>OR</u> Physics Honors <u>OR</u> Physics D <u>OR</u> AP Physics C <u>OR</u> Anatomy and Physiology <u>OR</u> Anatomy & Physiology-D <u>OR</u> AP Biology <u>OR</u> AP/D Chemistry <u>OR</u> Scientific Res. & Design <u>OR</u> Engineering Science <u>OR</u> Pathophysiology	Medical Microbiology <u>OR</u> Anatomy and Physiology <u>OR</u> Anatomy & Physiology-D <u>OR</u> AP Biology <u>OR</u> AP/D Chemistry <u>OR</u> Scientific Res. and Design <u>OR</u> Engineering Science <u>OR</u> Pathophysiology <u>OR</u> AP Physics C: Mechanics <u>OR</u> AP Environmental Science
L.O.T.E. <i>(2 Credits)</i> *2 Credits Language Other Than English or Computer Science Courses	Spanish HS I <u>OR</u> Turkish HS I <u>OR</u> Spanish HS II <u>OR</u> Turkish HS II <u>OR</u> AP Spanish Language Computer Science I	Spanish HS I <u>OR</u> Turkish HS I <u>OR</u> Spanish HS II <u>OR</u> Turkish HS II <u>OR</u> Spanish HS III <u>OR</u> Turkish HS III <u>OR</u> AP Computer Science A <u>OR</u> AP Computer Science Prin. <u>OR</u> AP Spanish Lang <u>OR</u> AP Spanish Literature Computer Science II	Spanish HS I <u>OR</u> Turkish HS I <u>OR</u> Spanish HS II <u>OR</u> Turkish HS II <u>OR</u> Spanish HS III <u>OR</u> Turkish HS III <u>OR</u> AP Computer Science A <u>OR</u> AP Computer Science Prin. <u>OR</u> AP Spanish Lang <u>OR</u> AP Spanish Literature	Spanish HS I <u>OR</u> Turkish HS I <u>OR</u> Spanish HS II <u>OR</u> Turkish HS II <u>OR</u> Spanish HS III <u>OR</u> Turkish HS III <u>OR</u> AP Computer Science A <u>OR</u> AP Computer Science Prin. <u>OR</u> AP Spanish Lang <u>OR</u> AP Spanish Literature
Fine Arts <i>(1 Credit)</i> *1 Credit Fine Arts	Art I <u>OR</u> Music I Orchestra I <u>OR</u> Music I Choir I <u>OR</u> Music I Inst. Ensemble I <u>OR</u> Music I Guitar I <u>OR</u> Music I Guitar II <u>OR</u> Music I Piano I	Art II Design I <u>OR</u> Music II Orchestra II. <u>OR</u> Music II Choir II <u>OR</u> Music II Inst. Ensemble II Music II Piano II (New)	Art III Design II <u>OR</u> Art III Ceramics <u>OR</u> Music III Orch. <u>OR</u> Music III Choir <u>OR</u> Music III Orch.	AP Studio Art: Design <u>OR</u> Music IV Orch. <u>OR</u> Music IV Choir <u>OR</u> Music IV Orch. IV. <u>OR</u> Music Studies Music Appr. I-D
P.E. <i>(1 Credits)</i> *1 Credit Physical Education	Found. of Personal Fitness <u>OR</u> PE Sub. Athletics I	Found. of Personal Fitness <u>OR</u> PE Sub. Athletics I	Found. of Personal Fitness <u>OR</u> PE Sub. Athletics I <u>OR</u> PE Sub. Athletics II	Found. of Personal Fitness <u>OR</u> PE Sub. Athletics I <u>OR</u> PE Sub. Athletics II

** Path-I courses include TSI Prep, SAT prep, and college counseling. Path-I credit is effective for Class of 2023 next year. Campuses may utilize the following scheduling options:
 ***College counseling curriculum at 12th grade level can be a senior counseling course and can be offered as a part of an elective (ex. Writing for Academia) or can be offered as full state credit. Only requirement is to cover the weekly (2 lessons) curriculum. Some campuses may choose to cover during advisory time as well.



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ENDORSEMENTS & PATHWAYS 2022-2023

Student Name: _____ Student ID #: _____ Grade Level: _____

Parent Name: _____ Parent E-mail: _____

Local Implementation Considerations:

Students completing two or more courses for at least two credits within a program of study earn concentrator status for Perkins V federal accountability reporting.

Proposed Indicator: Students finishing three or more courses for four or more credits with one course from level 3 or 4 within a program of study earn complete status for federal accountability reporting.

Science, Technology, Engineering and Math				
Pathway	Level 1	Level 2	Level 3	Level 4
Math	<input type="checkbox"/> Algebra I <input type="checkbox"/> Algebra I Honors <input type="checkbox"/> Geometry Honors	<input type="checkbox"/> Geometry <input type="checkbox"/> Geometry Honors <input type="checkbox"/> Algebra II Honors	<input type="checkbox"/> Algebra II <input type="checkbox"/> Algebraic Reasoning <input type="checkbox"/> Algebra II Honors <input type="checkbox"/> Pre-Calculus	<input type="checkbox"/> 4th Math
Science	<input type="checkbox"/> Biology <input type="checkbox"/> Biology Honors	<input type="checkbox"/> Chemistry <input type="checkbox"/> Chemistry Honors <input type="checkbox"/> AP/D Chemistry	<input type="checkbox"/> Physics <input type="checkbox"/> AP Physics I	<input type="checkbox"/> 4th Science
Biomedical Science	<input type="checkbox"/> Prin. of Bio. Sci. (PLTW)	<input type="checkbox"/> Human Body Systems (PLTW)	<input type="checkbox"/> Medical Microbiology <input type="checkbox"/> Medical Interventions (PLTW)	<input type="checkbox"/> Pathophysiology <input type="checkbox"/> Sci. Res. & Des.
Cybersecurity	<input type="checkbox"/> Foun. of Cyber. (PLTW)	<input type="checkbox"/> AP Comp. Science Principles <input type="checkbox"/> Comp. Science I	<input type="checkbox"/> AP Comp. Science A-Math <input type="checkbox"/> Digital Forensics (New)	<input type="checkbox"/> Cyber. Capstone (New?) <input type="checkbox"/> Independent Study in Technology Applications(New)
Engineering	<input type="checkbox"/> Intro. to Eng. Des. (PLTW) <input type="checkbox"/> Robotics (New)	<input type="checkbox"/> Engineering Science	<input type="checkbox"/> Digital Electronics (PLTW) <input type="checkbox"/> Eng. Des. & Dev. (PLTW) <input type="checkbox"/> Aerospace Engineering (PLTW)	<input type="checkbox"/> Eng. Des. & Dev. (PLTW) <input type="checkbox"/> Aerospace Eng. (PLTW) <input type="checkbox"/> Sci. Res. & Design
Prog. & Soft Dev.	<input type="checkbox"/> Fund. of Comp. Sci. (PLTW)	<input type="checkbox"/> Computer Science I <input type="checkbox"/> AP Comp. Sci. Prin.	<input type="checkbox"/> Computer Science II <input type="checkbox"/> AP Computer Science A.	<input type="checkbox"/> Independent Study in Technology Applications(New)
Web Dev. (CTE)	<input type="checkbox"/> Prin. of Info. Tech. (Closed)	<input type="checkbox"/> Computer Science I	<input type="checkbox"/> Web Design	<input type="checkbox"/> Web Game Development



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ENDORSEMENTS & PATHWAYS 2021-2022

Student Name: _____ Student ID #: _____ Grade Level: _____

Parent Name: _____ Parent E-mail: _____

Business, Marketing, and Finance				
Pathway	Level 1	Level 2	Level 3	Level 4
Accounting & Fin. Services (CTE) Debate Journalism/Yearbook	<input type="checkbox"/> Prin. of Bus. Mark. & Fin. <input type="checkbox"/> Debate I <input type="checkbox"/> Creative Writing	<input type="checkbox"/> Accounting I <input type="checkbox"/> Debate II <input type="checkbox"/> Adv. Jour. I News.	<input type="checkbox"/> Accounting II <input type="checkbox"/> Debate III <input type="checkbox"/> Adv. Jour. II News.	<input type="checkbox"/> Securities and Investments (New) <input type="checkbox"/> Ind. Study in English <input type="checkbox"/> Adv. Jour. III News. <input type="checkbox"/> Adv. Jour. III Yearbook

Public Service				
Pathway	Level 1	Level 2	Level 3	Level 4
Healthcare Diagnostics (CTE)	<input type="checkbox"/> Prin. of Health Sci.	<input type="checkbox"/> Medical Terminology	<input type="checkbox"/> Medical Microbiology <input type="checkbox"/> Pathophysiology	<input type="checkbox"/> Anat. and Phys. <input type="checkbox"/> Pathophysiology

Arts, Audio/Video Technology, and Communications				
Pathway	Level 1	Level 2	Level 3	Level 4
Design & Multimedia Arts	<input type="checkbox"/> Digital Media	<input type="checkbox"/> Graphic Design and Illustration I/Lab	<input type="checkbox"/> 3-D Modeling and Animation (New)	<input type="checkbox"/> Digital Arts and Animation (New)

Arts & Humanities				
Pathway	Level 1	Level 2	Level 3	Level 4
Lang. Other Than English	<input type="checkbox"/> Spanish HS I <input type="checkbox"/> Turkish I	<input type="checkbox"/> Spanish HS II <input type="checkbox"/> Turkish II	<input type="checkbox"/> Spanish HS III <input type="checkbox"/> Turkish III	<input type="checkbox"/> Spanish Language AP OR <input type="checkbox"/> Spanish Literature AP
Visual	<input type="checkbox"/> Art I	<input type="checkbox"/> Art II Design I OR <input type="checkbox"/> Art II Ceramics I	<input type="checkbox"/> Art III Design II OR <input type="checkbox"/> Art III Ceramics II <input type="checkbox"/> AP Studio Art: Drawing <input type="checkbox"/> AP Art: 2-D Des. Port. Studio	<input type="checkbox"/> Art IV Design III OR <input type="checkbox"/> Art IV Ceramics III <input type="checkbox"/> AP Studio Art: Drawing <input type="checkbox"/> AP Art: 2-D Des. Port. Studio
Performance	<input type="checkbox"/> Music I Orch. OR <input type="checkbox"/> Music I Choir	<input type="checkbox"/> Music II Orch. OR <input type="checkbox"/> Music II Choir	<input type="checkbox"/> Music III Orch. OR <input type="checkbox"/> Music III Choir	<input type="checkbox"/> Music IV Orch. OR <input type="checkbox"/> Music IV Choir
Instrument	<input type="checkbox"/> Music I Inst. Ens. I OR <input type="checkbox"/> Music I Guitar I OR <input type="checkbox"/> Music I Piano I OR	<input type="checkbox"/> Music II Inst. Ens. II OR <input type="checkbox"/> Music II Guitar II OR <input type="checkbox"/> Music II Piano II OR	<input type="checkbox"/> Music III Inst. Ens. III OR <input type="checkbox"/> Music III Guitar III OR <input type="checkbox"/> Music III Piano II OR	<input type="checkbox"/> Music IV Inst. Ens. IV OR <input type="checkbox"/> Music IV Guitar IV OR <input type="checkbox"/> Music IV Piano IV OR

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Music Studies Music
Appr. I-D

Music Studies Music
Appr. I-D

Music Studies Music
Appr. I-D

Music Studies Music
Appr. I-D

Multidisciplinary Endorsement

This endorsement pathway provides students with the opportunity to earn an endorsement from courses taken from multiple subject areas. The options include a coherent sequence or series of courses selected from one of the following:

- Four credits in each of the four foundation subject areas to include English IV and chemistry and/or physics; **OR**
- Four credits in AP or dual credit selected from English, mathematics, science, social studies, economics, languages other than English, or fine arts; **OR**
- Four advanced courses that prepare a student to enter the workforce successfully or postsecondary education without remediation from within one endorsement area or among endorsement areas that are not in a coherent sequence

COURSE DESCRIPTIONS

English I

Offered in: 9 **Credits:** 1 **Level:** On level

Prerequisites:

In English I, students begin developing college level skills in the use and interpretation of language to better understand themselves and their world. Students read and analyze texts from a variety of genres including cultural and historical fiction, informational texts, drama, poetry, persuasion, and literary non-fiction. Reading instruction centers not on mere comprehension, but focuses on building higher level thinking skills to evaluate the literary techniques of the author and interpret the themes of the work. Students learn literary forms and terms associated with selections being read and apply these in analysis. In addition to focusing on real-world writing skills, students write a variety of compositions including an imaginative story, an expository essay, a poem or script, a persuasive essay, and a literary response essay. Teachers model writing strategies that students apply in their work, centering on the development and mastery of focus and coherence, voice, depth of thought, and conventions. Additionally, they engage in research, presentations, speeches, and a thematic study.

English I Honors

Offered in: 9 **Credits:** 1 **Level:** Honors

Prerequisites:

In 9th grade, students may take Honors English Language Arts. Honors prepares students for high school AP courses in language

and literature by further emphasizing students' skills in using and analyzing language. In addition to the goals of on level language arts courses, students read from more advanced texts and seek to offer more in-depth interpretations. Students compose more advanced analytical papers using a college-level rubric with appropriate formatting and documentation.

English for Speakers of Other Languages I (ESOL-I)

Offered in: 9 **Credits:** 1 **Level:** On level

Prerequisite: *Language Proficiency Language Proficiency Placement Test, LPAC Recommendation*

English for Speakers of Other Languages I (ESOL I) is designed for beginning to intermediate fluency level students coping with a new language and a new culture. Basic skills are introduced in a simple, easy to- understand framework helping to bridge the gap between ESOL and other academic subjects. ESOL provides opportunities for students to practice listening, speaking, reading and writing skills as they develop independence and confidence in the use of English. The course includes the study of phonics, vocabulary, grammar, reading, and writing.

English II

Offered in: 10 **Credits:** 1 **Level:** On level

Prerequisites: *English I*

In English II, students build upon the knowledge and skills they learned in English I, with an increase in text complexity and rigor. In this course, students are developing college level skills in the use

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and interpretation of language to better understand themselves and their world. Students read and analyze texts from a variety of genres including cultural and historical fiction, informational texts, drama, poetry, persuasion, and literary non-fiction. Reading instruction centers not on mere comprehension, but focuses on building higher level thinking skills to evaluate the literary techniques of the author and interpret the themes of the work. Students learn literary forms and terms associated with selections being read and apply these in analysis. In addition to focusing on real-world writing skills, students write a variety of compositions including an imaginative story, an expository essay, a poem or script, a persuasive essay, and a literary response essay. Teachers model writing strategies that students apply in their work, centering on the development and mastery of focus and coherence, voice, depth of thought, and conventions. Additionally, they engage in research, presentations, and speeches.

English II Honors

Offered in: 10 Credits: 1 Level: Honors

Prerequisites: Honors English I or English I

In 10th grade, students may take Honors English Language Arts. Honors prepares students for high school AP courses in language and literature by further emphasizing students' skills in using and analyzing language. In addition to the goals of on level language arts courses, students read from more advanced texts and seek to offer more in-depth interpretations. Students compose more advanced analytical papers using a college-level rubric with appropriate formatting and documentation.

English for Speakers of Other Languages II (ESOL-II)

Offered in: 10 Credits: 1 Level: On level

Prerequisite: Language Proficiency Placement Test, LPAC Recommendation

English for Speakers of Other Languages II (ESOL II) is designed for intermediate to advanced fluency level students transitioning between basic skills instruction in ESOL I and grade level Sheltered English. Curriculum for ESOL II incorporates intensive academic vocabulary instruction while also linking literary concepts from ENG II to adapted ESOL texts. The course expectations are in alignment with those of ENG II, while instruction will also integrate literary concepts from ENG I and introduce literary terms from ENG III.

English III

Offered in: 11 Credits: 1 Level: On level

Prerequisites: English II

In English III, students build upon the knowledge and skills they learned in English II, with an increase in text complexity and rigor. In this course, students are developing college level skills in the use and interpretation of language to better understand themselves and their world. Students read and analyze texts from a variety of genres

including cultural and historical fiction, informational texts, drama, poetry, persuasion, and literary non-fiction. Reading instruction centers not on mere comprehension, but focuses on building higher level thinking skills to evaluate the literary techniques of the author and interpret the themes of the work. Students learn literary forms and terms associated with selections being read and apply these in analysis. In addition to focusing on real-world writing skills, students write a variety of compositions including an imaginative story, an expository essay, a poem or script, a persuasive essay, and a literary response essay. Teachers model writing strategies that students apply in their work, centering on the development and mastery of focus and coherence, voice, depth of thought, and conventions. Additionally, they engage in research, presentations, speeches, and a thematic study. Students refine their listening skills to better participate in direct instruction, classroom discussion, and cooperative group activities.

* While taking English III/IV, students will simultaneously satisfy the speech credit required for graduation.

AP English Language & Composition

Offered in: 11 Credits: 1 Level: AP/Dual

Prerequisites: Honors English II

In 11th grade, students may take AP English Language and Composition. Teachers create a course audit approved by College Board for accreditation. As College Board states, "An AP course in English Language and Composition engages students in becoming skilled readers of prose written in a variety of rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes. Both their writing and their reading should make students aware of the interactions among a writer's purposes, audience expectations, and subjects, as well as the way genre conventions and the resources of language contribute to effectiveness in writing."

English IV

Offered in: 12 Credits: 1 Level: On level

Prerequisites: English III

In English IV, students build upon the knowledge and skills they learned in English III, with an increase in text complexity and rigor. In this course, students are developing college level skills in the use and interpretation of language to better understand themselves and their world. Students read and analyze texts from a variety of genres including cultural and historical fiction, informational texts, drama, poetry, persuasion, and literary non-fiction. Reading instruction centers not on mere comprehension, but focuses on building higher level thinking skills to evaluate the literary techniques of the author and interpret the themes of the work. Students learn literary forms and terms associated with selections being read and apply these in analysis. In addition to focusing on real-world writing skills, students write a variety of compositions including an imaginative story, an expository essay, a poem or script, a persuasive essay, and a literary response essay. Teachers model writing strategies that students apply in their work, centering on the development and mastery of focus and coherence, voice, depth of thought, and conventions.

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Additionally, they engage in research, presentations, speeches, and a thematic study. Students refine their listening skills to better participate in direct instruction, classroom discussion, and cooperative group activities.

* While taking English III/IV, students will simultaneously satisfy the speech credit required for graduation.

AP English Literature & Compositions

Offered in: 12 Credits: 1 Level: AP/Dual

Prerequisites: English III

In 12th grade, students may take AP English Literature and Composition. Teachers create a course audit approved by College Board for accreditation. As College Board states, "The AP English Literature and Composition course aligns to an introductory college-level literary analysis course. The course engages students in the close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, symbolism, and tone. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works."

Algebra I

Offered in: 9 Credits: 1 Level: On level

Prerequisites: 8th grade math or equivalent

This course serves as the foundation for all upper level mathematics courses, and covers the following topics: Solving Equations and Inequalities, Introduction to Functions, Linear Functions, Systems of Equations and Inequalities, Exponents and Radicals, Sequences, Polynomials and Factoring, Quadratic Functions and Equations, Exponential Functions and Equations. Students will connect functions and their associated solutions in both mathematical and real-world situations. They will use technology to collect and explore data and analyze statistical relationships; they will generate and solve linear systems with two equations and two variables, and will create new functions through transformations. Students will also use mathematical relationships to generate solutions and make connections and predictions.

Algebra I Honors/Pre-AP

Offered in: 8-9 Credits: 1 Level: Honors/Pre-AP

Prerequisites: 8th grade math or equivalent

This course serves as the foundation for all upper level mathematics courses, and covers the following topics: Solving Equations and Inequalities, Introduction to Functions, Linear Functions, Systems of Equations and Inequalities, Exponents and Radicals, Sequences, Polynomials and Factoring, Quadratic Functions and Equations, Exponential Functions and Equations. Students will connect functions and their associated solutions in both mathematical and real-world situations. They will use technology to collect and explore data and analyze statistical relationships; they will generate and solve linear systems with two equations and two variables, and will create new functions through transformations. Students will also use mathematical relationships to generate solutions and make connections and predictions. Honors Algebra I will include a more in depth study of the topics covered in Algebra I. A strong emphasis is placed on increasing the development of critical thinking and problem solving skills. The intention of this course is to prepare students for AP level math course.

Geometry

Offered in: 9-11 Credits: 1 Level: On level

Prerequisites: Algebra I

In this course, students will study Transformational Geometry, Parallel and Perpendicular Lines, Relationships within Triangles, Polygons and Quadrilaterals, Congruent Triangles, Surface Area and Volume, Right Triangles and Trigonometry, Probability, Coordinate

Geometry, Similarity, Circle Measurement, Tools of Geometry, Area, Theorems about Circles, Reasoning and Proofs. Students use geometric methods, properties, and relationships as a means to recognize, draw, describe, connect, and analyze shapes and representations in the physical world. Geometry offers students many opportunities to explore geometric situations, properties of two- and three-dimensional objects, and to develop and prove conjectures using a variety of methods.

Geometry Honors/Pre-AP

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Offered in: 9-10 Credits: 1 Level: Honors/Pre-AP

Prerequisites: Algebra I

In this course, students will study Transformational Geometry, Parallel and Perpendicular Lines, Relationships within Triangles, Polygons and Quadrilaterals, Congruent Triangles, Surface Area and Volume, Right Triangles and Trigonometry, Probability, Coordinate Geometry, Similarity, Circle Measurement, Tools of Geometry, Area, Theorems about Circles, Reasoning and Proofs. Students use geometric methods, properties, and relationships as a means to recognize, draw, describe, connect, and analyze shapes and representations in the physical world. Geometry offers students many opportunities to explore geometric situations, properties of two- and three-dimensional objects, and to develop and prove conjectures using a variety of methods. In Honors Geometry students will extend their work with proofs to include additional theorems and alternative proof approaches. Emphasis will be placed on connections among Geometry and Algebra along with student's justification of reasoning. This course is intended to prepare students for AP level course work.

Algebra II

Offered in: 10-11 Credits: 1 Level: On level

Prerequisites: Algebra I

In this course, students will study Functions, Absolute Value Equations and Functions, Systems of Linear Equations, Quadratic Functions and Equations, Square Root Functions and Equations, Exponential and Logarithmic Functions and Equations, Polynomials, Radical Expressions, Cubic and Cube Root Functions and Equations, Rational Functions and Equations, Data. This course reviews and builds on those concepts learned in Algebra I and Geometry by placing more emphasis on applying the basic concepts of Algebra to rational and irrational numbers. The course expands techniques in analytical geometry and trigonometry learned in Geometry as a preview of the next two courses offered. Algebra II is a course which extends the content of Algebra I and provides further development of the concept of a function.

Algebra II Honors/Pre-AP

Offered in: 9-11 Credits: 1 Level: Honors/Pre-AP

Prerequisites: Algebra I

In this course, students will study Functions, Absolute Value Equations and Functions, Systems of Linear Equations, Quadratic Functions and Equations, Square Root Functions and Equations, Exponential and Logarithmic Functions and Equations, Polynomials, Radical Expressions, Cubic and Cube Root Functions and Equations, Rational Functions and Equations, Data. This course reviews and builds on those concepts learned in Algebra I and Geometry by placing more emphasis on applying the basic concepts of Algebra to rational and irrational numbers. The course expands techniques in analytical geometry and trigonometry learned in Geometry as a preview of the next two courses offered. Algebra II is a course which extends the content of Algebra I and provides further development of the concept of a function. Honors Algebra II will include a more in depth study of the topics covered in Algebra II. The intent of this course is to prepare students for AP level course work. Algebra II is the required pre-requisite for many fourth year math courses.

Pre-Calculus Honors/Pre-AP

Offered in: 10-12 Credits: 1 Level: Honors/Pre-AP

Prerequisites: Geometry, Algebra II

Honors Pre-Calculus is a preparation course for calculus that approaches topics from a function point of view, where appropriate, and is designed to strengthen and enhance conceptual understanding and mathematical reasoning used when modeling and solving mathematical and real-world problems. Students systematically work with functions and their multiple representations. The study of Honors Pre-Calculus deepens students' mathematical understanding and fluency with algebra and trigonometry and extends their ability to make connections and apply concepts and procedures at higher levels. In this course, students will study Equations and Inequalities, Graphs and Functions, Polynomial and Rational Functions, Inverse, Exponential, and Logarithmic Functions, Trigonometric Functions, the Circular Functions and Their Graphs, Trigonometric Identities and Equations, Applications of Trigonometry, Systems and Matrices, Analytic Geometry.

College Prep Math Course

Offered in: 12 Credits: 1 Level: On level

Prerequisites: Algebra I

This course is designed to support students who do not meet

college readiness indicators for mathematics. Course content will focus on strengthening numeracy, algebraic reasoning, and developing understanding of functional relationships. This course is available for seniors only, and aims to prepare seniors for college before they graduate high school. Topics include real numbers, basic geometry, polynomials, factoring, linear equations, inequalities, quadratic equations, rational expressions, factoring techniques, radicals, and algebraic fractions, complex numbers, graphing linear equations and inequalities, quadratic equations, systems of equations, graphing quadratic equations, and an introduction to functions. Algebraic techniques are emphasized in order to successfully complete an entry-level college mathematics course.

Statistics

Offered in: 11-12 Credits: 1 Level: On level

Prerequisites: Algebra I

In Statistics, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra I. Students will broaden their knowledge of variability and statistical processes as they study sampling and experimentation, categorical and quantitative data, probability and random variables, inference, and bivariate data. They will connect data and statistical processes to real-world situations. In addition, students will extend their knowledge of data analysis. In this course, students will study: statistical process sampling and experimentation, variability, categorical and quantitative data, probability and random variables, inference, bivariate data.

Algebraic Reasoning

Offered in: 11-12 Credits: 1 Level: On level

Prerequisites: Algebra I

In Algebraic Reasoning, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra I, continue with the development of mathematical reasoning related to algebraic understandings and processes, and deepen a foundation for studies in subsequent mathematics courses. Students will broaden their knowledge of functions and relationships, including linear, quadratic, square root, rational, cubic, cube root,

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exponential, absolute value, and logarithmic functions. Students will study these functions through analysis and application that includes explorations of patterns and structure, number and algebraic methods, and modeling from data using tools that build to workforce and college readiness such as probes, measurement tools, and software tools, including spreadsheets.

AP Statistics

Offered in: 10-12 Credits: 1 Level: AP/Dual

Prerequisites: Geometry, Algebra II

Students are introduced to major concepts and tools for collecting, analyzing, and drawing conclusions from data, and are engaged in collecting, organizing, analyzing, interpreting, and reporting data using statistical formulas and processes.

Students distinguish between random and biased sampling, and use statistical measures to analyze real-world phenomena.

This course prepares students for the College Board's Advanced

Placement (AP) Statistics Examination for possible college (one-semester, non-calculus based statistics) credit.

AP Calculus AB

Offered in: 11-12 Credits: 1 Level: AP/Dual

Prerequisites: Pre-Calculus

Students explore functions, graphs, limits, derivatives, and integrals. This course prepares students for the College Board's Advanced Placement (AP) Calculus AB Examination for possible college credit (first semester calculus). Students are advised to take a Calculus course in which they will be challenged, yet will perform successfully. Students may not take Calculus AB followed by Calculus BC.

AP Calculus BC

Offered in: 11-12 Credits: 1 Level: AP/Dual

Prerequisites: Pre-Calculus

Students explore all topics covered in AP Calculus AB plus additional topics including parametric, polar, and vector functions, and polynomial approximations and series. This course prepares students for the College Board's Advanced Placement (AP) Calculus BC Examination for possible college credit (a full year of calculus). This exam also has a Calculus AB sub-score grade for students to receive first semester college calculus credit.

Students are advised to take a Calculus course in which they will be challenged, yet will perform successfully. Students may not take Calculus AB followed by Calculus BC.