

Course Catalog 2024-2025

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

Select Your Endorsement

STEM
 Business & Industry
 Public Service
 Arts & Humanities
 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 Path CC I (<i>Elective</i>) | English II English II Honors Path CC II (<i>Elective</i>) | English III AP English Language English 3-D Path CC III (<i>Elective</i>) | College Prep: English OR English IV OR English IV-D OR AP English Literature OR Creative Writing (<i>Elective</i>) |
| 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 OR Algebra I Honors OR Geometry Honors OR 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 OR Geometry Honors OR Algebra II Honors* OR Algebra II OR Pre-Calculus Honors OR Pre-Calculus-D (CA 1 st Sem)/ Pre-Calculus-D (TR 2 nd Sem) AP Precalculus | Algebra II** OR Algebra II Honors OR AP Computer Science A OR Pre-Calculus Honors OR Pre-Calculus-D OR AP Calculus AB OR AP Pre-Calculus AP Statistics Path III Math | Algebra II OR Algebra II Honors OR Pre-Calculus Honors OR Pre-Calculus-D OR Statistics OR College Prep: Math OR AP Calculus AB OR AP Computer Science A OR Calculus I (honors) (only Seniors !!) AP Precalculus AP Statistics |
| Social Studies <i>(4 Credits)</i> *World Geography, World History, US History, and US Government & Economics | World Geography OR AP Human Geography | World History OR AP World History Psychology/AP Psychology (<i>Elective</i>) AP Seminar | U.S History OR AP U.S History Psychology/AP Psychology (<i>Elective</i>) AP Seminar | U.S Gov./ Econ. OR U.S Gov.-D/ Econ-D Psychology/AP Psychology (<i>Elective</i>) AP US Gov/AP Econ AP Seminar |
| Science <i>(4 Credits)</i> *Biology, Chemistry, Physics, and 1 Credit Science Course | Biology OR Biology Honors | Chemistry OR Chemistry Honors OR AP Biology | Physics OR Physics Honors OR Physics(Dual) OR AP Physics I AP Physics C: Mechanics OR Anatomy and Physiology OR Anatomy & Physiology-D OR AP Biology OR Scientific Res. & Design OR Engineering Science OR AP Chemistry | Medical Microbiology OR Anatomy and Physiology OR Anatomy & Physiology-D OR AP Biology OR Scientific Res. and Design OR Engineering Science OR AP Physics C: Mechanics OR AP Environmental Science AP Chemistry |
| L.O.T.E. <i>(2 Credits)</i> *2 Credits Language Other Than English or Computer Science Courses | Spanish HS I OR Turkish HS I OR Spanish HS II OR Turkish HS II OR AP Spanish Language, OR AP Computer Science Prin | Spanish HS I OR Turkish HS I OR Spanish HS II OR Turkish HS II OR AP Computer Science A OR AP Computer Science Prin. OR AP Spanish Lang OR AP Spanish Literature | Spanish HS I OR Turkish HS I OR Spanish HS II OR Turkish HS II OR AP Computer Science A OR AP Computer Science Prin. OR AP Spanish Lang OR AP Spanish Literature | Spanish HS I OR Turkish HS I OR Spanish HS II OR Turkish HS II OR AP Computer Science A OR AP Computer Science Prin. OR AP Spanish Lang OR AP Spanish Literature |
| Fine Arts <i>(1 Credit)</i> *1 Credit Fine Arts | Art I OR Music I Orchestra I OR Music I Choir I OR Music I Inst. Ensemble I OR Music I Guitar I OR Art Appreciation -Dual Music I Guitar I Music I Piano I | AP Studio Art 2-D Design & Drawing OR Art I OR Music I Orchestra I OR Music I Choir I OR Music I Inst. Ensemble I OR Music I Guitar I OR Music I Piano I Art Appreciation -Dual | AP Studio Art 2-D Design & Drawing OR Art I OR Music I Orchestra I OR Music I Choir I OR Music I Inst. Ensemble I OR Music I Guitar I OR Music I Piano I OR Music I Piano I Art Appreciation -Dual | AP Studio Art 2-D Design OR Art I OR Music I Orchestra I OR Music I Choir I OR Music I Inst. Ensemble I OR OR Music I Guitar I OR Music I Guitar II OR Music I Piano I Art Appreciation -Dual |

| | | | | |
|---|--|---|--|--|
| P.E. <i>(1 Credits)</i> *1 Credit Physical Education | Lifetime Fitness& Wellness <u>OR</u> PE Sub. Athletics I | Lifetime Fitness& Wellness <u>OR</u> PE Sub. Athletics I PE Individual Teams | Lifetime Fitness& Wellness <u>OR</u> PE Sub. Athletics I <u>OR</u> PE Sub. Athletics II PE Individual Teams | Lifetime Fitness& Wellness <u>OR</u> PE Sub. Athletics I <u>OR</u> PE Sub. Athletics II PE Individual Teams |
|---|--|---|--|--|

ENDORSEMENTS & PATHWAYS 2023-2024

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"/> College Prep Math <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"/> Physics <input type="checkbox"/> AP Physics I <input type="checkbox"/> AP Biology <input type="checkbox"/> D-Physics | <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 Interventions (PLTW) | <input type="checkbox"/> Biomedical Innovation (PLTW) |
| Cybersecurity | <input type="checkbox"/> Foun. of Cyber. (PLTW) | <input type="checkbox"/> AP Comp. Science Principles | <input type="checkbox"/> AP Comp. Science A-Math | <input type="checkbox"/> Ind.Studies in Tech App C |
| Engineering | <input type="checkbox"/> Intro. to Eng. Des. (PLTW) | <input type="checkbox"/> Engineering Science | <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"/> AP Comp. Sci. Prin. | <input type="checkbox"/> AP Computer Science A. | <input type="checkbox"/> Independent Study in Tech. Applications-C |

ENDORSEMENTS & PATHWAYS 2023-2024

Student Name: _____ Student ID #: _____ Grade Level: _____
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| Business, Marketing, and Finance | | | | |
|----------------------------------|---|---------------------------------------|--|---|
| Pathway | Level 1 | Level 2 | Level 3 | Level 4 |
| Accounting & Fin. Services (CTE) | <input type="checkbox"/> Prin. of Bus. Mark. & Fin. | <input type="checkbox"/> Accounting I | <input type="checkbox"/> Accounting II | <input type="checkbox"/> Securities and Investments |

| 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"/> Anat. and Phys. <input type="checkbox"/> Pathophysiology |

| 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 Language AP OR <input type="checkbox"/> Spanish Literature AP |
| Visual | <input type="checkbox"/> Art I | | <input type="checkbox"/> AP Studio 2-D Design <input type="checkbox"/> Art Appreciation Dual | <input type="checkbox"/> AP Art and Design <input type="checkbox"/> Art Appreciation |
| Design & Multimedia Arts | <input type="checkbox"/> Digital Media | <input type="checkbox"/> Graphic Design and Illustration I/Lab* | <input type="checkbox"/> Graphic Design and Illustration II | <input type="checkbox"/> Digital Arts and Animation |
| Performance | <input type="checkbox"/> Music I Orch. OR <input type="checkbox"/> Music I 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 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

ACADEMIC COURSEWORK
(Effective for Class of 2023 and Beyond)

| | Freshman | | Sophomore | | Junior | | Senior | |
|---|----------------------------------|---------------------------------|------------------------------------|---|--|--|---|---|
| 1 | | Honors English-I | | | English-III | AP English Lang- Comp. | English-IV AP Eng Lit. College Prep ELA | English-IV AP Eng Lit. College Prep ELA |
| 2 | <i>English-I (Path CC I)</i> | Elective | <i>English-II (Path CC II)</i> | <i>Honors English-II (Path CC II)</i> | | Upper Level Math Course | Honors Pre-Cal/ Statistics/ Upper Level Math Course College Prep Math(HB5) | Honors Pre-Cal/ Statistics/ Upper Level Math Course College Prep Math(HB5) |
| 3 | | Honors Geo Honors Alg I | Geometry // Honors PreCal | | | Elective | 4th Science Course/AP or upper level Science Course/CTE Course4 | 4th Science Course/AP or upper level Science Course/CTE Course5 |
| 4 | <i>Algebra-I</i> | Elective | Elective // Elective | <i>Honors Alg-II</i> | Path College Career-III** (SAT or TSI Prep) | Path College Career-III** (SAT or TSI Prep) | Economics/Governme nt | Economics/Governm ent |
| | Lunch | Lunch | Lunch | Lunch | Lunch | Lunch | Lunch | Lunch |
| | Advisory | Advisory | Advisory | Advisory | Advisory | Advisory | Advisory | Advisory |
| 5 | Biology | Honors Biology | Chemistry | On Ramps Chemistry/ Honors Chemistry | Physics/ | Honors Physics On Ramps Physics-1 AP-Physics 1 | Path College Career-IV***/ Elective | Path College Career-IV***/ Elective |
| 6 | W. Geography/AP Human Geography | W. Geography/AP Human Geography | W. History AP World History | W. History AP World History | US History AP US History | US History AP US History | Elective | Elective |
| 7 | LOTE-1/2 | LOTE-1/2 | LOTE-2/3 | LOTE-2/3 | PE | PE | Fine Arts | Fine Arts |
| 8 | Elective | Elective | Elective | Elective | Elective | Elective | Elective | Elective |
| | 6 credits | 8 credits | 7 credits | 6 credits | 7 credits | 8 credits | 8 credits | 8 credits |

Course Description for Math Based Courses

Algebra I

Offered in: 8-9 Credits: 1 Level: On level Prerequisites:

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

Offered in: 8-9 Credits: 1 Level: Honors Prerequisites:

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. Pre-AP 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: 9-10 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

Offered in: 9-10 Credits: 1 Level: Honors

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 Pre-AP 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

Offered in: 9-11 Credits: 1 Level: Honors

Prerequisites: Algebra and Geometry

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. Pre-AP 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- D

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

Prerequisites: Geometry, Algebra II- Geometry, Algebra II, College Ready in all subjects (Students will earn Math 1314 and Math 1316)

Pre-Calculus-D 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 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. Students will receive a total of 6 college credit for Math 1314 and Math 1316.

Statistics

Offered in: 10-12 Credits: 1 Prerequisites: Algebra

I Level: On-Level

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. Students will study sampling and experimentation, categorical and quantitative data, probability and random variables, inference, and bivariate data. Students will connect data and statistical processes to real-world situations. In addition, students will extend their knowledge of data analysis.

AP Calculus AB

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

Prerequisites: Pre- Calculus- D

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.

Calculus I

Offered in: 11-12 Credits: 1 Level: Honors

Prerequisites: Pre-Calculus

Students explore functions, graphs, limits, derivatives, and integrals. You should have successfully completed courses in which you studied algebra, geometry, trigonometry, analytic geometry, and elementary functions. In particular, you should understand the properties of linear, polynomial, rational, exponential, logarithmic, trigonometric, inverse trigonometric, and piecewise-defined functions and know how to graph these functions and solve equations involving them.

Course Description for Science Based Courses

Biology

Offered in: 9 Credits: 1 Level: On level Prerequisites: 8th Grade Science

Biology is designed to acquaint students with basic concepts in science process skills, laboratory skills, and the study of living organisms. Topics discussed include: ecosystem and the environment; metabolism and energy transfer in living organism; living system; homeostasis; cells, tissues, and organs; nucleic acids and genetics; classification, taxonomy, and biological evolution. Students in this course will be required to complete a grade level appropriate science project that will constitute 20% of the final grade in the course.

Biology Honors

Offered in: 9 Credits: 1 Level: Honors Prerequisites: 8th Grade Science

Biology Honors is designed to acquaint students with basic concepts in science process skills, laboratory skills, and the study of living organisms. Topics discussed include: ecosystem and the environment; metabolism and energy transfer in living organism; living system; homeostasis; cells, tissues, and organs; nucleic acids and genetics; classification, taxonomy, and biological evolution. In addition, students will learn to set up inquiry investigations, use descriptive statistic to analyze data and write investigation report. Students are expected to develop critical thinking, problem solving and writing skills necessary to be successful in the AP Biology course. The course can be considered college preparatory, suggested for the average to above average student. Any student enrolled in this course will be required to take the SAT II Biology exam. Furthermore, students in this course will be required to complete a grade level appropriate science investigation project that will constitute 20% of the final grade in the course.

Chemistry

Offered in: 10 Credits: 1 Level: On level Prerequisites: Algebra I, Biology

Chemistry provides students with a broad survey of basic chemistry. The first semester examines chemical and physical properties, the qualitative nature of chemical reactions, chemical periodicity, and bonding. The second semester continues with the quantitative nature of chemical reactions, states of matter, gaseous behavior, and solutions. Throughout the year, the course makes use of laboratory investigations to better develop the relationships between experiment and theory. Students in this course will be required to complete a grade level appropriate science event project that constitutes 20% of the final grade in the course.

Chemistry Honors

Offered in: 10 Credits: 1 Level: Honors Prerequisites: Algebra I, Biology

Chemistry Honors provides students with a broad survey of basic chemistry. The first semester examines chemical and physical properties, the qualitative nature of chemical reactions, chemical periodicity, and bonding. The second semester continues with the quantitative nature of chemical reactions, states of matter, gaseous behavior, and solutions. Throughout the year, the course makes use of laboratory investigations to better develop the relationships between experiment and theory. Students in this course will be required to complete a grade level appropriate science event project that constitutes 20% of the final grade in the course.

Physics

Offered in: 11 Credits: 1 Level: On level Prerequisites: Algebra I

Physics, as the most basic of all sciences, introduces the nature of basic things around us such as matter, energy, heat, motion, forces, light, and sound. This course is designed to teach the laws of nature in their simplicity, and problem solving skills corresponding to both ideal and real world situations. The course of physics is integrated with basic mathematical rules including mechanics, heat and thermodynamics, waves and optics, electricity and magnetism, and atomic and nuclear physics. A set of experiments will allow students to implement the theory into the real world as well as appreciate the beauty of the natural world. Students in this course will be required to complete a grade level appropriate science event project that constitutes 20% of the final grade in the course.

Physics Honors

Offered in: 11 Credits: 1 Level: Honors Prerequisites: Algebra I

Physics Honors is a comprehensive introductory physics course covering the major topics of classical physics including mechanics, thermodynamics, waves, optics, electromagnetism, and atomic theory. Pre-AP Physics is a first year course in Physics designed to prepare the student for entry into AP level Physics in a subsequent year. Mathematics is very important for physics, and will be used extensively in this class, therefore a solid background in algebra and trigonometry is essential for student success. Laboratory investigations emphasize accurate observations, collection, analysis, and presentation of data, and safe manipulation of laboratory apparatus and materials. In this Pre-AP class, students will be challenged to design their own laboratory investigations following scientific principles of research and proper lab practices.

AP Physics I

Offered in: 11 Credits: 1 Level: AP/Dual Prerequisites: Algebra I

AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through classroom study, in-class activity, and hands-on, inquiry-based laboratory work as they explore concepts like systems, fields, force interactions, change, conservation, and waves.

Dual Physics I

Offered in: 11 Credits: 1 Level: Dual Prerequisites: Algebra I and Geometry, College Readiness Recommended: Algebra II and Dual Precalculus(Trigonometry)

Dual Physics I is a Dual Enrollment course with Lone Star . Students cultivate their understanding of physics through inquiry- based investigations as they explore topics such as Newtonian mechanics (including rotational motion), work, energy, and power, mechanical waves and sound, and both introductory and simple circuits. 25 percent of the instructional time will be spent on hands- on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply science practices.

World Geography

Offered in: 9-10 Credits: 1 Level: On level

Prerequisites: None

According to TEA's *19 TAC Chapter 113 Texas Essential Knowledge and Skills for Social Studies, Subchapter C, Section §113.43*, in World Geography, students examine people, places, and environments at local, regional, national, and international scales from the spatial and ecological perspectives of geography. Students describe the influence of geography on events of the past and present, as well as compare how components of culture shape the characteristics of regions. They analyze the impact of technology and human modifications on the physical environment, and use problem-solving and decision-making skills to ask and answer geographic questions.

AP Human Geography

Offered in: 9 Credits: 1 Level: AP/Dual Prerequisites: None

According to the College Board, the Advanced Placement (AP) Human Geography course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012).

World History

Offered in: 10 Credits: 1 Level: On level Prerequisites: None

According to TEA's *19 TAC Chapter 113 Texas Essential Knowledge and Skills for Social Studies, Subchapter C, Section §113.42*, World History offers students an overview of the entire history of humankind. The major emphasis is on the study of significant people, events, and issues from the earliest times to the present. Students evaluate the causes and effects of both political and economic imperialism, and of major political revolutions since the 17th century. Students analyze the connections between major developments in science and technology and the growth of industrial economies while using the process of historical inquiry to research, interpret, and synthesize multiple sources of evidence.

AP World History

Offered in: 10 Credits: 1 Level: AP/Dual Prerequisites: None

According to the College Board, the AP World History course "focuses on developing students' abilities to think conceptually about world history from approximately 8000 BCE to the present and apply historical thinking skills as they learn about the past. Five themes of equal importance — focusing on the environment, cultures, state-building, economic systems, and social structures — provide areas of historical inquiry for investigation throughout the course. AP World History encompasses the history of the five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania, with special focus on historical developments and processes that cross multiple regions."

U.S. History

Offered in: 11 Credits: 1 Level: On level Prerequisites: According to TEA's 19 TAC Chapter 113 Texas Essential Knowledge and Skills for Social Studies, Subchapter C, Section

§113.41, "students examine the history of the United States from 1877 to the present. The course content is based on the founding documents of the U.S. government, which provide a framework for its heritage. Historical content focuses on the political, economic, and social events related to industrialization and urbanization, major wars, domestic and foreign policies, and reform

movements, including civil rights. Throughout the course, students examine and analyze the following: the impact of geographic factors on major events and eras while analyzing their causes and effects, the impact of constitutional issues on American society, the dynamic relationship of the three branches of the federal government, the efforts to expand the democratic process, the relationship between the arts and popular culture and the times during which they were created, and the impact of technological innovations on American life. Students also utilize critical-thinking skills and a variety of primary and secondary source material to explain and apply different methods that historians use to understand and interpret the past, including multiple points of view and historical context."

AP U.S. History

Offered in: 11-12 Credits: 1 Level: AP Prerequisites:

This course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in U.S. history. According to the College Board, the course "focuses on developing students' abilities to think conceptually about U.S. history from approximately 1491 to the present and apply historical thinking skills as they learn about the past. Seven themes of equal importance — identity; peopling; politics and power; work, exchange, and technology; America in the world; environment and geography; and ideas, beliefs, and culture — provide areas of historical inquiry for investigation throughout the course. These require students to reason historically about continuity and change over time and make comparisons among various historical developments in different times and places".

U.S. Government/ Govt- Dual

Offered in: 12 Credits: 0.5 Level: On level/Dual

Prerequisites: U.S. History

According to TEA's *19 TAC Chapter 113 Texas Essential Knowledge and Skills for Social Studies, Subchapter C, Section §113.44*, this course "focuses on the principles and beliefs upon which the United States was founded and on the structure, functions, and powers of government at the national, state, and local levels; it is the culmination of the civic and governmental content and concepts studied from Kindergarten through required secondary courses. Students learn major political ideas and forms of government in history. They examine the relationship between governmental policies and the culture of the United States, and identify examples of policies that encourage scientific research."

Economics/Econ- Dual

Offered in: 12 Credits: 0.5 Level: On level/Dual

According to TEA's *19 TAC Chapter 118 Texas Essential Knowledge and Skills for Economics with Emphasis on the Free Enterprise System and Its Benefits, Subchapter A, Section §118.4*, this course is "designed to survey and apply basic macroeconomic concepts relating to personal, institutional, and social decision-making, and primarily focuses on how decisions to buy, sell, lend, and regulate effect output, employment, income distribution, and the balance of trade. Students examine the factors that determine national income, employment, and prices. They analyze patterns of consumption and saving, private investment, government policy, business fluctuations, and the interaction between money and national income. The last part of the course looks at international economics including exchange rates, markets, and monetary systems."

AP Psychology

Offered in: 10-12 Credits: 0.5 Level: AP Prerequisites:

According to the College Board, the AP Psychology course "is designed to introduce students to the scientific study of human behavior, mental processes and experiences. Students will be exposed to psychological facts, principles, and phenomena associated with each of the major subfields within psychology as well as exploring scientific methods and ethics. AP Psychology is a course that covers material similar to what is taught in a college-level introductory psychology course. This course may be used to meet only elective course requirements for state graduation.

Spanish I

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

Prerequisites: None

This course serves as an introduction to the Spanish language and culture. Basic listening, speaking, reading, writing, viewing, and sharing skills are developed-- communication skills are the primary focus of this course. At the end of Level I, students will be able to express themselves and engage in simple conversations in Spanish within the limits of their knowledge of vocabulary and structure. A significant amount of this course is conducted in Spanish.

Spanish II

Offered in: 9-12 Credits: 1 Level: On level

Prerequisites: Spanish I

The basic skills learned in Spanish I are broadened to include all verb tenses and grammatical structures, in addition to a greatly expanded vocabulary. Listening, speaking, reading, writing, viewing, and presenting skills are stressed with an emphasis on oral language proficiency. Students also study ancient Aztec, Incan, and Mayan cultures as well as modern Hispanic customs. While knowledge of other cultures, connections to other disciplines, comparisons between languages and cultures, and community interactions all contribute to and enhance the communicative language learning experience, communicative skills are the primary focus of this course. A significant amount of this course is conducted in Spanish.

Spanish III

Offered in: 10-12 Credits: 1 Level: On level

Prerequisites: Spanish II

Conversational Spanish, dealing with reacting to everyday situations and solving daily problems through conversational exchange, is emphasized. Vocabulary is extensive. Grammar is covered mainly through application of the spoken language and reading; writing is used to reinforce the spoken language. Customs and geography of the Spanish-speaking countries are also reviewed. A significant amount of this course is conducted in Spanish.

AP Spanish Language

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

Prerequisites: Spanish III

Advanced Placement Spanish Language (Spanish IV) gives students the opportunity to comprehend formal and informal spoken Spanish. Emphasis is placed on a student's ability to compose expository passages and to express ideas orally with accuracy and fluency. The acquisition of vocabulary and a grasp of structures allow the student to read newspapers, magazine articles, and literature with ease and accuracy. This course will prepare the students for the College Board's AP Spanish Language exam, and is conducted completely in Spanish.

Turkish I

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

Prerequisites: None

This is a beginning level Turkish course serving as an introduction to the Turkish language and culture for non-native language speakers. Students develop basic understanding of elements of Turkish language knowledge and skills in vocabulary, pronunciation, reading, listening, speaking, grammar, and writing. In particular, this course aims to build interpersonal, presentational and interpretive communication skills. Through the partnership with local Turkish cultural centers, students may be served opportunities to interact with native speakers under the supervision of the teacher. Communicative tasks aim to develop vocabulary and improve fluency and pronunciation. Each unit consists of a new vocabulary theme, reading, listening, speaking, writing, grammar, and cultural topics. Turkish I is suggested for 8th and upper graders, and there is no prerequisite course.

Turkish II

Offered in: 9-12 Credits: 1 Level: On level

Prerequisites: Turkish I

This course is continuation of Turkish I. Students who successfully completed Turkish I can be offered Turkish II. It is designed to further improve the basic grammar, vocabulary, reading, speaking, understanding, listening and writing knowledge and skills acquired in the Turkish I. In particular, it aims to develop communication skills. The course also provides insights into Turkish culture through the target language or native language accordingly. Through the partnership with local Turkish cultural centers, students may be served opportunities to interact with native speakers under the supervision of the teacher. At the end of this course, students can handle short social interactions in everyday situations using a series of simple sentences with a limited vocabulary and understanding.

Turkish III - IV

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

Prerequisites: Turkish II

This course is a continuation of Turkish II. Students learn more complex grammar topics and sentence structures. As in the first two courses, the primary focus is on developing knowledge and skills for communication. Each unit consists of a vocabulary theme, reading, listening, speaking, writing, and grammar topics. Authentic Turkish resources, such as TV shows, movies, newspapers, etc. are often used as well. Culture and language are inseparable; students continue to expand their target culture knowledge and experience it in every possible circumstance. Through partnerships with local Turkish cultural centers, students may be served opportunities to interact with native speakers under the supervision of the teacher. By the end of this course, students can communicate and handle short social interactions on a wide variety of familiar topic

Course Description for Endorsements/Electives

Principles of Biomedical Science PLTW

Offered in: 9-10 Credits: 1 Level: AP

Prerequisites: None

In the introductory course of the PLTW Biomedical Science program, students explore concepts of biology and medicine to determine factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing them to design their own experiments to solve problems.

Human Body Systems (PLTW)

Offered in: 10-12 Credits: 1 Level: AP Prerequisites: None

In the Project Lead The Way [PLTW] Human Body Systems (HBS) course, students examine the interactions of body systems as they explore deeply biological identity, communication, power, movement, protection, and homeostasis. Through individual and team activities, projects, and problems, students design experiments, investigate the structures and function of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary actions, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin, work through relevant real world cases, and often assume the role of biomedical professionals to solve medical mysteries. Throughout the PLTW HBS curriculum students practice problem solving with structured activities and progress to open-ended projects and problems that require them to develop planning, documentation, communication and other professional skills.

Medical Intervention (PLTW)

Offered in: 10-12 Credits: 1 Level: AP Prerequisites:

In the Medical Interventions (MI)-PLTW course students investigate the variety of interventions involved in the prevention, diagnosis, and treatment of disease as they follow the lives of a fictitious family. Through these scenarios students will be exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Each family case scenario will introduce multiple types of interventions; reinforce concepts learned in the previous two courses, and present new content. Interventions may range from simple diagnostic tests to treatment of complex diseases and disorders. These interventions will be showcased across the generations of the family and will provide a look at the past, present, and future of biomedical science. Lifestyle choices and preventive measures are emphasized throughout the course as well as the important role that scientific thinking and engineering design play in the development of interventions of the future.

Medical Microbiology

Offered in: 10-12 Credits: 1 Level: Regular

Prerequisites: Biology and Chemistry, a course from the Health Science cluster

The Medical Microbiology course is designed to explore the microbial world, studying topics such as pathogenic and nonpathogenic microorganisms, laboratory procedures, identifying microorganisms, drug-resistant organisms, and emerging diseases.

Pathophysiology

Offered in: 11-12 Credits: 1 Level: Regular

Prerequisites: Biology and Chemistry, a course from the Health Science cluster

The Pathophysiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and

scientific problem solving. Students in Pathophysiology will study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease.

Scientific Research and Design

Offered in: 12 Credits: 1 Level: On Level Prerequisites: Biology, Chemistry and Physics

Scientific Research and Design is a broad-based course designed to allow districts and schools considerable flexibility to develop local curriculum to supplement any program of study or coherent sequence. The course has the components of any rigorous scientific or engineering program of study from the problem identification, investigation design, data collection, data analysis, formulation, and presentation of the conclusions. All of these components are integrated with the career and technical education emphasis of helping students gain entry-level employment in high-skill, high-wage jobs and/or continue their education. Students must meet the 40% laboratory and fieldwork requirement. This course satisfies a high school science graduation requirement. Students shall be awarded one credit for successful

Introduction to Engineering Design

Offered in: 9-12 Credits: 1 Level: AP Prerequisites:

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software, and use an engineering notebook to document their work.

Engineering Science PLTW

Offered in: 10-12 Credits: 1 Level: AP Prerequisites: Geometry

Engineering Science is an engineering course designed to expose students to some of the major concepts and technologies that they will encounter in a postsecondary program of study in any engineering domain. Students will have an opportunity to investigate engineering and high-tech careers. In Engineering Science, students will employ science, technology, engineering, and mathematical concepts in the solution of real-world challenge situations. Students will develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges. Students will also learn how to document their work and communicate their solutions to their peers and members of the professional community.

Engineering Design and Development PLTW

Offered in: 11,12 Credits: 1 Level: AP Prerequisites: None

Engineering Design and Development is the capstone course in the PLTW high school engineering program. It is an open-ended engineering research course in which students design and develop an original solution to a well-defined and justified open-ended problem by applying an engineering design process. Students perform research to select, define, and justify a problem. After carefully defining the design requirements and creating multiple solutions, students select an approach, create, and test the solution prototype.

Aerospace Engineering

Offered in: 11,12 Credits: 1 Level: AP Prerequisites: None

PLTW Aerospace Engineering ignites students' learning in the fundamentals of atmospheric and space flight. Aerospace Engineering is one of the specialization courses in the PLTW Engineering program. The course deepens the skills and knowledge of an engineering student within the context of atmospheric and space flight.

Foundation of Cybersecurity Offered

in: 9,10 Credits: 1 Level: Regular

Prerequisites: None

Cybersecurity is an evolving discipline concerned with safeguarding computers, networks, programs, and data from unauthorized access. As a field, it has published and unpublished pieces of writing, develop peer and self-assessments for effective writing, and set their own goals as writers

Art I

Offered in: 9-12 Credits: 1 Level: On

Level Prerequisites: None

This course will serve as an introduction to art through a variety of lectures, presentations, assignments, and demonstrations to cover a wide range of topics. Art I is meant to introduce tools for students to develop skills for visual communication by providing opportunities for a hands-on approach for exploration.

The students are encouraged to experiment with materials, techniques, and processes in projects structured to create enthusiasm about art making. Each project will provide challenges that will require students to develop their critical thinking and critical making skills.

AP Studio Art 2_D Design

Offered in: 10-12 Credits: 1 Level: AP Prerequisites:

Recommended to take Art level courses previously

In an AP Art and Design course, you'll develop the skills that artists and designers use and create a portfolio of work you'll submit for an AP score. AP Art and Design students submit their portfolios digitally through the AP Digital Portfolio. Students do not mail physical work to the AP Program.

Music Choir I- IV

Offered in: 9-12 Credits: 1 Level: On Level

The high school choir program provides a music ensemble during the school day. Instructional priorities include vocal technique, musicianship, critical listening, cultural growth, basic music theory, creative self-expression, rehearsal and concert etiquette, self-discipline, responsible citizenship, effective communication, problem-solving, and the production of quality products.

Performances include 4 concerts and festival performances.

Performances include 4 concerts and festival performances. Students may also participate in a series of competitions as solo and ensemble contests.

Prerequisite: Teacher Approval/Audition for Choir II-IV

Instrumental Ensemble I

Offered in: 9-12 Credits: 1 Level: On Level

(Due to availability, this class can only be 20-22 students large. Seniors should get priority)

A Year-long course that offers students a beginning experience of playing a classical band or string instrument. The instruments taught are flute, clarinet, saxophone, trumpet, trombone, tuba, percussion, violin, viola, cello, or double bass. Instructional priorities include instrumental technique, musicianship, critical listening, cultural growth, basic music theory, creative self-expression, rehearsal and concert etiquette, self-discipline, responsible citizenship, effective communication, problem-solving, and production of quality products. Students are required to perform in one concert.

Music 1 Orchestra I- IV

Offered in: 9-12 Credits: 1 Level: On Level

The high school orchestra program provides a music ensemble during the school day. Instructional priorities include instrumental technique, musicianship, critical listening, cultural growth, basic music theory, creative self-expression, rehearsal and concert etiquette, self-discipline, responsible citizenship, effective communication, problem-solving, and production of quality products. Students must play a classical string instrument (ex.

Violin, Viola, Cello, and Double Bass) or a classical wind/percussion instrument (Flute, Clarinet, Saxophone, Mallet, Snare drum). Orchestra students are allowed to continue musical growth and experience quality music literature. Several large ensembles, small ensembles, and individual performance opportunities are given provided for students in performing orchestras. Performances include 4 concerts and festival performances. Students may also participate in a series of competitions as solo and ensemble contests.

Prerequisites: 1) Instrumental Ensemble I or 2) Teacher approval/audition (1 year of experience playing a classical string instrument, woodwind, brass, or percussion instrument).

Music 1 Piano I

Offered in: 9-12 Credits: 1 Level: On Level

(Due to availability, this class can only be 14-16 students large. Seniors should get priority)

A Year-long course that offers students a beginning experience of playing the piano. Instructional priorities include instrumental technique, musicianship, critical listening, cultural growth, basic music theory, creative self-expression, rehearsal and concert etiquette, self-discipline, responsible citizenship, effective communication, problem-solving, and production of quality products. Students are required to perform in one concert.

Prerequisites: A piano or keyboard to practice with at home and Alfred Adult All in One Coursebook 1

Music 1 Guitar I

Offered in: 9-12 Credits: 1 Level: On Level

(Due to availability, this class can only be 18-20 students large. Seniors should get priority)

A Year-long course that offers students a beginning experience of playing the guitar. Instructional priorities include instrumental technique, musicianship, critical listening, cultural growth, basic music theory, creative self-expression, rehearsal and concert etiquette, self-discipline, responsible citizenship, effective communication, problem-solving, and production of quality products. Students are required to perform in one concert.

Prerequisites: purchase or rent a guitar and purchase of method book

Music Studies Music Appreciation

Offered in: 9-12 Credits: 1 Level: Dual Credit/AP

Prerequisites: College Readiness through TSI

A Year-long course that involves the understanding of music through the study of cultural periods, major composers, and musical elements, illustrated with audio recordings and live performances

(Due to availability, this class can only be 14-16 students large. Seniors should get priority)

A Year-long course that offers students an Intermediate experience of playing the piano or guitar. Instructional priorities include instrumental technique, musicianship, critical listening, cultural growth, basic music theory, creative self-expression, rehearsal and concert etiquette, self-discipline, responsible citizenship, effective communication, problem-solving, and production of quality products. Students are required to perform in one concert.

Prerequisites: Purchase/rent an instrument, Piano I / Guitar I Course, or Teacher approval.

Graphic Design and Illustration II

Offered in: 10-12 Credits: 1 Level: Regular

Prerequisites: Graphic Design and Illustration I

Within this context, students will be expected to develop an advanced understanding of the industry with a focus on mastery of content knowledge and skills.

Lifetime Fitness and Wellness

Offered in: 9-12 Credits: 1 Level: Regular

Prerequisites: None

The Lifetime Fitness and Wellness Pursuits course offers current approaches for the foundation of personal fitness, physical literacy, lifetime wellness, and healthy living. Students in Lifetime Fitness and Wellness Pursuits will apply the knowledge and skills to demonstrate mastery of the concepts needed to achieve lifetime wellness. Students will participate in a variety of physical activities for attaining personal fitness and lifetime wellness. Analyze how nutrition, exercise, and other factors impact body composition.

PE. Substitute Athletics I-II

Offered in: 9-12 Credits: 1 Level: Regular

Physical education is the foundation of a well-balanced curriculum. "It is an academic subject with a planned and sequential K-12 curriculum based on the national standards for physical education. Physical education provides cognitive content and instruction designed to develop motor skills, knowledge, and behaviors for physical activity and physical fitness.

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