



Discovery High School

Course Guide

2019-2020

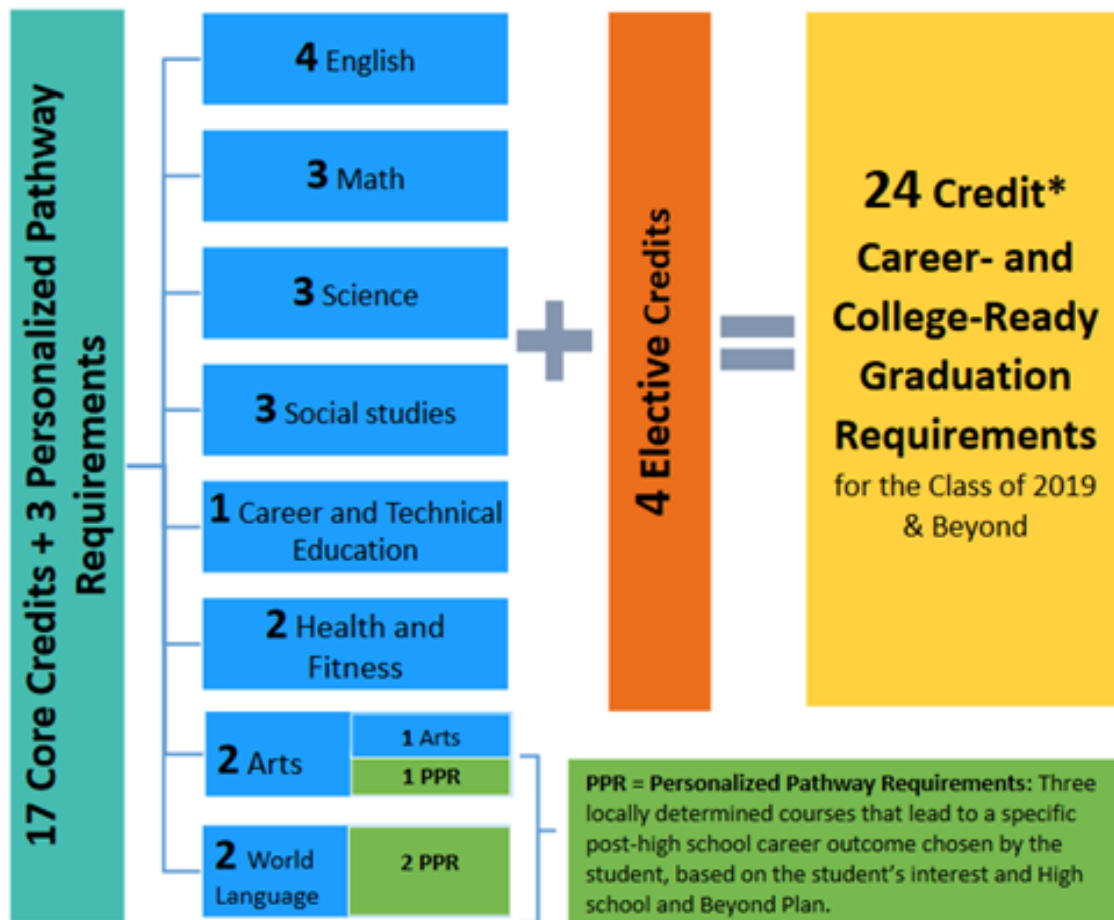
At Discovery High School, we engage with challenging, real-world problems. We interact with content through relevant and meaningful projects while developing collaboration, communication, creativity, and critical thinking skills that launch students into dynamic futures. We learn for life.

DISCOVERY HIGH SCHOOL - COURSE GUIDE
TABLE OF CONTENTS

<u>GRADUATION REQUIREMENTS</u>	3
<u>PROGRAM TRACKS</u>	5
<u>COLLEGE ADMISSIONS</u>	6
<u>ADVANCED PLACEMENT CLASSES</u>	7
<u>PERSONALIZED PATHWAY</u>	8
<u>NINTH GRADE COURSES</u>	9
<u>TENTH GRADE COURSES</u>	12
<u>ELEVENTH GRADE COURSES</u>	18
<u>TWELFTH GRADE COURSES</u>	24
<u>ELECTIVES</u>	27
<u>GENERAL INFORMATION</u>	41

GRADUATION REQUIREMENTS

$$17 + 3 + 4 = 24$$



DHS Graduation Requirements			
English	4 credits	9th, 10th, 11th, 12th	<u>State Assessment Requirements:</u> <input type="checkbox"/> Math SBA <input type="checkbox"/> ELA SBA <input type="checkbox"/> Science WCAS (class of 2021 & beyond)
Math	3 credits	Algebra I, Geometry, Algebra II* , Pre-Calculus, Calculus, Statistics, Consumer Math (* Grad requirements)	
Science	3 credits	Environmental Science, Biochemistry, Physics, 4th Year elective science	
Social Studies	3 credits	Human Geography, World History (CWP Requirement met), U.S. History (Civics Requirement met)	
Career & Tech Ed. (CTE)	1 credit	CTE Elective	
Health	0.5 credit	Health	<u>Additional Graduation Requirements:</u> <input type="checkbox"/> WA State History (taken in 7th grade) <input type="checkbox"/> Senior Project <input type="checkbox"/> High School & Beyond Plan
Physical Education	1.5 Credits	9th Grade Fitness, 1.0 credit P.E. electives	
World Language <u>OR</u> PPR Electives	2 credits	2 years of same World Language (Proficiency Exam) * <u>OR</u> 2 years of PPR electives	
Fine Arts <u>OR</u> 1 Art & 1 PPR	2 credits	2 years of Art OR 1 Art + 1 PPR	
General Electives	4 credits	Any 4 credits of electives	
Total Credits: 24			

*Please contact your counselor for information regarding the World Language proficiency exam.

PROGRAM PATHWAYS

Students will meet minimum requirements for graduation from Discovery High School through annual review of credits and course planning. Our charge to **See & Serve** each student has enabled us to present six different program pathways for our students, depending on their college and career interests and postsecondary plans.

The following **example** programs of study are options for students at Discovery High School:

Business & Marketing: Intro to Makerspace, Business, Graphic Technology, Marketing, Web Design, Creative Fabrication, Pre-Internship, Internship

Computer Science: Python Coding 1 & 2, Gaming & Design, AP Computer Science, Computer Science Seminar, Pre-Internship, Internship

Engineering: Intro to Makerspace, Python Coding 1 & 2, Research, Design & Engineering 1 & 2, Engineering Elective (Wood, Metal, or Electronics), Pre-Internship, Internship

Fabrication & Design: Intro to Makerspace, Python 1, Graphic Technology 1 & 2, Creative Fabrication, Design Seminar, Pre-Internship, Internship

Fine & Performing Arts: Fine Arts 1 & 2, Media & Film, Visual Communications Design, Stage Band, Vocal Ensemble, Music Production 1 & 2

Liberal Arts: Spanish 1 & 2, Fine Arts 1, Music Production 1, Business 1, Intro to Makerspace

COLLEGE ADMISSIONS

Students planning on attending a four-year college or university are encouraged to research entry requirements directly with the institution. The requirements given below are for Washington State public four-year college/university freshman admission. Students seeking admission to university should maintain a strong GPA and push themselves academically within coursework and projects at DHS. (<https://www.wsac.wa.gov/sites/default/files/2014.CADRS.Detailed.pdf>)

English – 4.0 credits, taken all four years

Mathematics – 3.0 credits – Algebra I, Geometry and Algebra II or beyond are required

Social Studies – 3.0 credits – A minimum of three years of Social Studies is required

Science – 3.0 credits – Lab science preferred (Biology, Environmental Science, Chemistry, or Physics)

World Language – 2.0 credits – Two years of one language – additional years highly recommended for highly selective colleges

Fine, Visual or Performing Arts – 1.0 credit – Acceptable classes for Art credit are listed in this guide

P.S.A.T. = Sophomore year (given only once in mid-October) – Good practice for the S.A.T. and to qualify for National Merit Scholarships.

S.A.T. or A.C.T. = Junior year or early Senior year – (Tests offered many times during the year). Either test accepted for college admission.

FAFSA = Senior year – The FAFSA is the gatekeeper for all forms of financial aid which includes grants, work study, scholarships and student loans. The priority window is between October 1st and December 1st and colleges will use this information for creation of a financial aid package. Students and families may access the application online via www.fafsa.gov

College Admission – Senior year – Students can apply for the school(s) of their choice. Official Transcripts can be acquired through Parchment Services. Students can learn more about these processes on the DHS website or by visiting their DHS School Counselor.

N.C.A.A. = Senior year – Student athletes need to apply to the NCAA Clearinghouse to qualify for participation in college athletics.

Additional requirement for entry into Washington State four year colleges: Students must take either Math or Algebra based Science during their Senior year.

ADVANCED PLACEMENT CLASSES

DHS offers Advanced Placement classes that are certified by the College Board and well-aligned with Project-Based-Learning. Through AP Exams, you have the opportunity to earn credit or advanced standing at most of the nation's colleges and universities. AP courses are available for 9th - 12th grade students. Please make sure to verify college/program acceptance of AP credit with the post-secondary institution.

DHS will follow the AP scope and sequence in courses and will provide students with the opportunity to take AP exams. AP exam fees are the responsibility of the student, however, students in need will be supported in fee waivers as designated by AP, state and district policy.

What is special about AP classes?

- Skills developed in AP classes prepare students for college courses.
- Discussions are challenging, engaging, probing and intellectual.
- AP students are taught how to think, read, and write critically. Teaching students to evaluate and interpret challenging primary source texts is a crucial AP component.
- AP classes teach students to analyze, interpret, reason, and understand their subject from multiple perspectives.

What are the benefits of taking AP?

- AP classes are highly regarded by universities and college admission officers.
- AP success is directly correlated to success at the university level. Students who succeed in AP generally excel at the university level.
- AP prepares students for the rigors of college. Many students feel confident and ready to enter college after AP; many say college is easier.

We offer the following Advanced Placement (AP) classes for the 2019-20 school year and will continue to add additional dual-credit opportunities as grade levels are added to DHS.

AP Human Geography* - 9th grade	AP Seminar* - 10th grade
AP World History* - 10th grade	AP Research** - 11th grade
AP Computer Science** - 11th or 12th grade	*Approved by the College Board for 2019-20
AP Spanish or Mandarin Chinese** - 12th grade	**Planned for 2020-2021 and 2021-2022, pending approval by the College Board

PERSONALIZED PATHWAY

The Personalized Pathway is intended to provide students the option of exploring more deeply a pathway oriented toward specific post-high school career or educational goals.

Definition of a Personalized Pathway

- A sequence of courses, chosen by you, that prepare you to meet your graduation requirements and specific post-high school educational goals.
- Created in collaboration between you, your parent/guardian, school counselor, advisor, or teacher.
- Linked to your High School and Beyond Plan.
- The Personalized Pathway allows you to choose courses to meet four year graduation requirements and can replace up to three credits, 1.0 of Fine Art and/or 2.0 credits of World Language.
- These three choices, along with four electives and seventeen core courses complete your 24 credits needed for high school graduation.

What are the benefits of a Personalized Pathway?

- The Personalized Pathway allows students the option of taking a longer sequence of courses within an area of interest or passion.
- An increase the relevance and impact of a student's high school education by allowing more choice and freedom in course selection.
- Technical skill attainment specific to your chosen post-high school plan.

Examples of a Personalized Pathway:

A PPR for a student interested in focusing on hands-on projects in the Fabrication Lab might take:

- 1.0 Credit Fine Arts 1 & 2 (1.0 Credit Arts required)
- 1.0 Credit Research, Design & Engineering 1 & 2 (PPR, in place of 1.0 Credit Arts)
- 1.0 Woodworking and Metalworking (PPR, in place of 1.0 Credit World Language)
- 1.0 Pre-Internship and Internship (PPR, in place of 1.0 Credit World Language)

A PPR for a student interested in focusing Fine and Performing Arts might take:

- 2.0 Credits Fine or Performing Arts
- 1.0 Credit Select Vocal Ensemble (PPR, in place of 1.0 Credit World Language)
- 1.0 Credit Music Production 1 & 2 (PPR, in place of 1.0 Credit World Language)

A PPR for a student interested in focusing on 4-year university prep might take:

- 1.0 Credit Fine Arts 1 & 2 (1.0 Credit Arts required)
- 1.0 Credit Senior Year Math Elective (PPR, in place of 1.0 Credit Arts)
- 2.0 Credits World Language

Ninth Grade Courses & Standards

<u>Course</u>	<u>Description</u>	<u>Credits</u>
ENG091 ENG092	<p>9TH LITERATURE & COMPOSITION</p> <p>English/Language Arts I (9th grade) courses build upon students' prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and usually include the four aspects of language use: reading, writing, speaking, and listening. Typically, these courses introduce and define various genres of literature, with writing exercises often linked to reading selections.</p> <ul style="list-style-type: none"> • Cite text to support analysis and inferences drawn from a text. • Determine theme or central idea of a text. • Write arguments to support a claim using reasoning and evidence. • Write informative texts to explain and analyze complex ideas. • Write narratives to develop events or experiences using details and sequencing. • Produce clear writing appropriate to task, purpose, and audience. • Conduct research to answer a question. • Gather relevant information from multiple credible sources. • Present information in a manner appropriate to task, purpose, and audience. • Demonstrate command of conventions when writing or speaking. • Demonstrate understanding of figurative language. 	1.0
SOC093 SOC094	<p>AP HUMAN GEOGRAPHY (AP Exam Optional)</p> <p>Following the College Board's suggested curriculum designed to parallel college-level Human Geography courses, AP Human Geography introduces students to the systematic study of patterns and processes that have shaped the ways in which humans understand, use, and alter the earth's surface. Students use spatial concepts and landscape analysis to examine human social organization and its environmental consequences and also learn about the methods and tools geographers use in their science and practice.</p> <ul style="list-style-type: none"> • Understands the economic issues and problems that all societies face. • Understands the physical characteristics, cultural characteristics, and location of places, regions, and spatial patterns on the Earth's surface. • Understands human interaction with the environment. • Analyzes and evaluates human interaction with the environment across the world in the past or present. • Understands the causes and effects of voluntary and involuntary migration in the world in the past or present. • Analyzes change and continuity within a historical time period. • Understands and analyzes causal factors that have shaped major events in history. • Analyzes and evaluates how technology and ideas have shaped world history. • Understands that there are multiple perspectives and interpretations of historical events. • Uses critical reasoning skills to analyze and evaluate positions. • Uses inquiry-based research. 	1.0
SCI091 SCI092	<p>ENVIRONMENTAL SCIENCE</p> <p>Environmental Science courses examine the mutual relationships between organisms and their environment. In studying the interrelationships among plants, animals, and humans, these courses usually cover the following subjects: photosynthesis, recycling and regeneration, ecosystems, population and growth studies, pollution, and conservation of natural resources.</p>	1.0

	<ul style="list-style-type: none"> ● Apply science and engineering practices (methods). ● Analyze scientific content using cross cutting concepts (big ideas). ● Model the cycling of Earth's matter. ● Represent biodiversity factors mathematically. ● Evaluate evidence for the effect of group behavior on survival. ● Justify the coevolution of life and Earth's systems. ● Develop claim from data about Earth's feedback systems. ● Use scientific reasoning about the age of rocks and Earth. ● Demonstrate Earth's formation of physical features. ● Analyze energy flow data to evaluate how climate change impacts Earth's systems. ● Develop claims from data about Earth's resources effect on humans. ● Evaluate design solutions for sustainable resource management. ● Illustrate digitally how human activities affect Earth systems. ● Use heredity statistics to support explanations of natural selection. ● Model carrying capacity of ecosystems in stable and changing conditions. ● Justify evolutionary change due to biotic & abiotic influences on genetics. ● Build a sustainable model of Earth populations and natural resources. ● Create technological solutions that reduce human impact on natural systems. 	
PED111	BODYWORKS Bodyworks emphasizes lifelong health and physical fitness through low impact, moderate intensity cardio and strength training. <ul style="list-style-type: none"> ● Understand a variety of motor skills and movement pattern. ● Understand concepts and strategies related to movement and performance. ● Understand FITT principle. ● Have good sportsmanship, positive participation, daily readiness and kindness towards self and others. ● Understand the importance of physical activity for enjoyment, challenge, and social interaction. 	0.5
PED110	ADVANCED FITNESS Advanced Fitness emphasizes strength, speed, and agility through high intensity cardio, circuit training, and competitive athletics. A good choice for students who love sports and athletics. <ul style="list-style-type: none"> ● Understand a variety of motor skills and movement pattern. ● Understand concepts and strategies related to movement and performance. ● Understand FITT principle. ● Have good sportsmanship, positive participation, daily readiness and kindness towards self and others. ● Understand the importance of physical activity for enjoyment, challenge, and social interaction. 	0.5
MTH301 MTH302	ALGEBRA 1 Algebra I courses include the study of properties and operations of the real number system; evaluating rational algebraic expressions; solving and graphing first-degree equations and inequalities; translating word problems into equations; operations with and factoring of polynomials; and solving simple quadratic equations. <ul style="list-style-type: none"> ● Define, construct, and represent arithmetic and geometric sequences in multiple representations, including explicit and recursive equations. ● Interpret, construct, analyze, and use linear and exponential functions, including functions with rational exponents. ● Understand, interpret, use, and build functions that model relationships between 	1.0

	<p>two quantities, including identifying key features of functions.</p> <ul style="list-style-type: none"> • Apply properties, reason about, and solve linear equations and inequalities. • Solve systems of linear equations and inequalities. • Create and analyze key aspects of quadratic equations, including comparisons to linear and exponential models. • Create, analyze, solve, and identify key aspects of quadratic equations that describe numbers or relationships. • Analyze and build piecewise functions using prior knowledge of functions and their key features. • Summarize, represent, and interpret data on a single count or measurement variable. 	
MTH401 MTH402	<p>GEOMETRY</p> <p>Geometry courses, emphasizing an abstract, formal approach to the study of geometry, typically include topics such as properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems, and formal proofs; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; and rules of angle measurement in triangles.</p> <ul style="list-style-type: none"> • Define, represent, describe, and compare transformations in the plane. • Understand congruence as a series of rigid transformations and make constructions. • Prove geometric theorems. • Understand and prove theorems involving similarity and define and solve problems involving right triangles. • Understand and apply theorems of circles, including arc length and areas of sectors. • Use coordinates to prove simple geometric theorems algebraically. • Visualize relationships between 2-D and 3-D objects, model with geometry, and apply trigonometry to general triangles. • Understand and use the rules of probability to interpret data and compute probabilities of compound events. 	1.0
MTH403 MTH404	<p>APPLIED GEOMETRY</p> <p>Students will be able to synthesize information from a variety of instructional and technological sources by applying scientific/mathematical notation. This will include skill drills, hands on practice with calculators, diagnostic (written) testing, group projects, problem solving techniques, unit quizzes, pre and post-tests.</p> <ul style="list-style-type: none"> • The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences. • The student will demonstrate oral, interpersonal, written, and electronic communication and presentation skills and understands how to apply those skills. • The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions. • The student will demonstrate self-advocacy skills by achieving planned, individual goals • The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies. • The student will communicate, participate, and advocate effectively in pairs, small groups, teams, and large groups in order to reach common goals. • The student will demonstrate knowledge of conflict resolution and challenge management. 	1.0

	<ul style="list-style-type: none"> • The student will analyze the complex responsibilities of the leader and follower and demonstrate the ability to both lead and follow <p>Solve Problems</p> <ul style="list-style-type: none"> • Identify and ask significant questions that clarify various points of view and lead to better solutions <p>Access and Evaluate Information</p> <ul style="list-style-type: none"> • Access information efficiently (time) and effectively (sources) • Evaluate information critically and competently • Use information accurately and creatively for the issue or problem at hand <p>Technology</p> <ul style="list-style-type: none"> • Use technology as a tool to research, organize, evaluate and communicate information <p>Manage goals and time</p> <ul style="list-style-type: none"> • Set goals with tangible and intangible success criteria <p>Use the common measurement units for length, area, volume, capacity, and weight in the English system.</p> <ul style="list-style-type: none"> • Use the common measurement units for length, area, volume, capacity, and weight in the metric system. • Convert measurement units from one form to another and carry out calculations that involve various measurement units. • Read measurements taken with common measuring tools. 	
MTH201 MTH202	<p>ALGEBRA 2</p> <p>Algebra II course topics typically include field properties and theorems; set theory; operations with rational and irrational expressions; factoring of 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; and operations with rational and irrational exponents.</p> <ul style="list-style-type: none"> • Find, solve, and produce inverse functions and build a function that models a relationship between two quantities. • Interpret, analyze, build, and solve exponential and logarithmic functions. • Perform arithmetic operations on polynomials and complex numbers, understand the relationship between zeros and factors of polynomials, and use complex numbers in polynomial identities. • Determine roots, write equations, and examine the end behavior of polynomial functions. • Solve, graph, and interpret rational functions and rewrite rational expressions. • Extend the domain of trigonometric functions using the unit circle and model periodic phenomena with trigonometric functions. • Use, graph, and model trigonometric equations and use trigonometric identities. • Identify the effect of transformations on functions, combine standard function types using arithmetic operations, and compose functions. • Understand, use, and compare normal distributions and understand the different methods of sampling. 	1.0

Tenth Grade Courses & Standards

<u>Course</u>	<u>Description</u>	<u>Credits</u>
ENG211 ENG212	<p>AP SEMINAR (AP Exam Optional)</p> <p>Designed by the College Board to parallel college-level courses in critical thinking and communications, AP Seminar courses provide students with the opportunity to explore complex real world issues through cross-curricular lenses. Course topics vary and may include local, civic, or global issues and interdisciplinary subject areas. Courses typically emphasize research, communication, and critical-thinking skills to explore the issues addressed. Students may also examine source materials such as articles and other texts; speeches and personal accounts; and relevant artistic and literary works.</p> <p>Understand and Analyze Argument</p> <ul style="list-style-type: none"> Identifying the main idea in arguments, analyzing the reasoning, and evaluating the validity of the conclusions. <p>Evaluate Sources and Evidence</p> <ul style="list-style-type: none"> Evaluating the credibility and relevance of sources and the evidence they present. <p>Establish Argument</p> <ul style="list-style-type: none"> Developing a well-reasoned argument clearly connecting the thesis, claims and evidence. <p>Select and Use Evidence</p> <ul style="list-style-type: none"> Strategically choosing evidence to effectively support claims. <p>Understand and Analyze Context</p> <ul style="list-style-type: none"> Understanding the complexity of a problem or issue and connecting arguments to the broader context in which they are situated. <p>Understand and Analyze Perspective</p> <ul style="list-style-type: none"> Comparing and interpreting multiple diverse perspectives on an issue to understand its complexity. <p>Engage Audience</p> <ul style="list-style-type: none"> Choosing and employing effective written and oral communication techniques, considering audience, context, and purpose. <p>Apply Conventions</p> <ul style="list-style-type: none"> Choosing and consistently applying an appropriate citation style and effective conventions of writing. <p>Collaborate</p> <ul style="list-style-type: none"> Working constructively with others to accomplish a team goal or task. <p>Reflect</p> <ul style="list-style-type: none"> Articulating challenges, successes, and moments of insight that occur throughout the inquiry process. 	1.0
SOC553 SOC554	<p>AP WORLD HISTORY (AP Exam Optional)</p> <p>Following the College Board's suggested curriculum designed to parallel college-level World History courses, AP World History courses examine world history from 8000 BCE to the present with the aim of helping students make connections of historical evolution across times and places. These courses highlight the interaction between humans and the environment; development and interaction of cultures; state-building, expansion and conflict; creation, expansion and interaction of economic systems; and development and transformation of social structures.</p> <p>AP HISTORY DISCIPLINARY PRACTICES</p> <p>Analyze Historical Evidence - primary and secondary sources</p> <ul style="list-style-type: none"> Explain the relative historical significance of a source's point of view, purpose, 	1.0

	<p>historical situation, and/or audience. Explain a source's credibility and/or limitations.</p> <ul style="list-style-type: none"> • Evaluate a source's credibility and/or limitations. • Explain how a historian's claim or argument is supported with evidence. • Analyze patterns and trends in quantitative data in non-text based sources. • Evaluate the effectiveness of a historical claim or argument. <p>Argument Development</p> <ul style="list-style-type: none"> • Make a historically defensible claim in the form of an evaluative thesis. • Support an argument using specific and relevant evidence. • Use historical reasoning to explain relationships among pieces of historical evidence. • Consider ways that diverse or alternative evidence could be used to qualify or modify an argument. <p>AP HISTORY REASONING SKILLS</p> <p>Skill 1: Contextualization</p> <ul style="list-style-type: none"> • Use context to explain the relative historical significance of a specific historical development or process. <p>Skill 2: Comparison</p> <ul style="list-style-type: none"> • Explain the relative historical significance of similarities and/or differences between different historical developments or processes. <p>Skill 3: Causation</p> <ul style="list-style-type: none"> • Explain the difference between primary and secondary causes and between short- and long-term effects. • Explain the relative historical significance of different causes and/or effects. <p>Skill 4: Continuity and Change Over Time</p> <ul style="list-style-type: none"> • Explain the relative historical significance of specific historical developments in relation to a larger pattern of continuity and/or change. 	
<p>SCI098 SCI099</p>	<p>BIOCHEMISTRY</p> <p>Students study basic and advanced chemistry concepts in the context of biological application. Topics include elements, reactions, bond energy, matter conservation, properties of water, protein structure, homeostasis, mitosis, meiosis, heredity, and body systems.</p> <p>Physical Sciences</p> <ul style="list-style-type: none"> • Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms. • Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. • Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles. • Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy. • Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs. • Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium. • Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction. • Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay. <p>Life Sciences</p>	<p>1.0</p>

	<ul style="list-style-type: none"> • Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells. • Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. • Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. • Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms. • Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy. • Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules. • Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed, resulting in a net transfer of energy. • Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions. • Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring. • Make and defend a claim based on evidence that inheritable genetic variations may result from (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors. • Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population. • Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. <p>Earth and Space Sciences</p> <ul style="list-style-type: none"> • Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes. 	
MTH301 MTH302	<p>ALGEBRA 1</p> <p>Algebra I courses include the study of properties and operations of the real number system; evaluating rational algebraic expressions; solving and graphing first-degree equations and inequalities; translating word problems into equations; operations with and factoring of polynomials; and solving simple quadratic equations.</p> <ul style="list-style-type: none"> • Define, construct, and represent arithmetic and geometric sequences in multiple representations, including explicit and recursive equations. • Interpret, construct, analyze, and use linear and exponential functions, including functions with rational exponents. • Understand, interpret, use, and build functions that model relationships between two quantities, including identifying key features of functions. • Apply properties, reason about, and solve linear equations and inequalities. • Solve systems of linear equations and inequalities. • Create and analyze key aspects of quadratic equations, including comparisons to linear and exponential models. • Create, analyze, solve, and identify key aspects of quadratic equations that describe numbers or relationships. • Analyze and build piecewise functions using prior knowledge of functions and their key features. • Summarize, represent, and interpret data on a single count or measurement variable. 	1.0

MTH401 MTH402	<p>GEOMETRY</p> <p>Geometry courses, emphasizing an abstract, formal approach to the study of geometry, typically include topics such as properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems, and formal proofs; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; and rules of angle measurement in triangles.</p> <ul style="list-style-type: none"> • Define, represent, describe, and compare transformations in the plane. • Understand congruence as a series of rigid transformations and make constructions. • Prove geometric theorems. • Understand and prove theorems involving similarity and define and solve problems involving right triangles. • Understand and apply theorems of circles, including arc length and areas of sectors. • Use coordinates to prove simple geometric theorems algebraically. • Visualize relationships between 2-D and 3-D objects, model with geometry, and apply trigonometry to general triangles. • Understand and use the rules of probability to interpret data and compute probabilities of compound events. 	1.0
MTH403 MTH404	<p>APPLIED GEOMETRY</p> <p>Students will be able to synthesize information from a variety of instructional and technological sources by applying scientific/mathematical notation. This will include skill drills, hands on practice with calculators, diagnostic (written) testing, group projects, problem solving techniques, unit quizzes, pre and post-tests.</p> <ul style="list-style-type: none"> • The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences. • The student will demonstrate oral, interpersonal, written, and electronic communication and presentation skills and understands how to apply those skills. • The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions. • The student will demonstrate self-advocacy skills by achieving planned, individual goals • The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies. • The student will communicate, participate, and advocate effectively in pairs, small groups, teams, and large groups in order to reach common goals. • The student will demonstrate knowledge of conflict resolution and challenge management. • The student will analyze the complex responsibilities of the leader and follower and demonstrate the ability to both lead and follow <p>Solve Problems</p> <ul style="list-style-type: none"> • Identify and ask significant questions that clarify various points of view and lead to better solutions <p>Access and Evaluate Information</p> <ul style="list-style-type: none"> • Access information efficiently (time) and effectively (sources) • Evaluate information critically and competently • Use information accurately and creatively for the issue or problem at hand <p>Technology</p> <ul style="list-style-type: none"> • Use technology as a tool to research, organize, evaluate and communicate information 	1.0

	<p>Manage goals and time</p> <ul style="list-style-type: none"> • Set goals with tangible and intangible success criteria <p>Use the common measurement units for length, area, volume, capacity, and weight in the English system.</p> <ul style="list-style-type: none"> • Use the common measurement units for length, area, volume, capacity, and weight in the metric system. • Convert measurement units from one form to another and carry out calculations that involve various measurement units. • Read measurements taken with common measuring tools. 	
MTH201 MTH202	<p>ALGEBRA 2</p> <p>Algebra II course topics typically include field properties and theorems; set theory; operations with rational and irrational expressions; factoring of 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; and operations with rational and irrational exponents.</p> <ul style="list-style-type: none"> • Find, solve, and produce inverse functions and build a function that models a relationship between two quantities. • Interpret, analyze, build, and solve exponential and logarithmic functions. • Perform arithmetic operations on polynomials and complex numbers, understand the relationship between zeros and factors of polynomials, and use complex numbers in polynomial identities. • Determine roots, write equations, and examine the end behavior of polynomial functions. • Solve, graph, and interpret rational functions and rewrite rational expressions. • Extend the domain of trigonometric functions using the unit circle and model periodic phenomena with trigonometric functions. • Use, graph, and model trigonometric equations and use trigonometric identities. • Identify the effect of transformations on functions, combine standard function types using arithmetic operations, and compose functions. • Understand, use, and compare normal distributions and understand the different methods of sampling. 	1.0
MTH601 MTH602	<p>PRE-CALCULUS</p> <p>Pre-Calculus courses combine the study of Trigonometry, Elementary Functions, Analytic Geometry, and Mathematical Analysis topics as preparation for calculus. Topics typically 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.</p> <ul style="list-style-type: none"> • Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle. • Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle. • Use special triangles to determine geometrically the values of sine, cosine, tangent for $\pi/3$, $\pi/4$ and $\pi/6$, and use the unit circle to express the values of sine, cosine, and tangent for x, $\pi + x$, and $2\pi - x$ in terms of their values for x, where x is any real number. • Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions. 	1.0

	<ul style="list-style-type: none"> • Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline. • Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed. • Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context. • Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant of the angle. • Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems. 	
HED100	<p>HEALTH</p> <p>Topics covered within Health Education courses may vary widely, but typically include personal health (nutrition, mental health and stress management, drug/alcohol abuse prevention, disease prevention, and first aid) and consumer health issues. The courses may also include brief studies of environmental health, personal development, and/or community resources.</p> <ul style="list-style-type: none"> • Comprehend concepts related to health promotion and disease prevention to enhance health. • Analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors. • Demonstrate the ability to access valid information and products and services to enhance health. • Demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks. • Demonstrate the ability to use decision-making skills to enhance health. • Demonstrate the ability to use goal-setting skills to enhance health. • Demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks. • Demonstrate the ability to advocate for personal, family, and community health. 	0.5

Eleventh Grade Courses & Standards

<u>Course</u>	<u>Description</u>	<u>Credits</u>
ENG311 ENG312	<p>AP RESEARCH* (AP Exam Optional)</p> <p>Designed by the College Board to parallel college-level courses in independent research, AP Research courses provide students with the opportunity to conduct an in-depth, mentored research project. Course topics include research methods, ethical research practices, and accessing, analyzing, and synthesizing information to address a research question. Courses culminate with an academic thesis paper and an oral defense of the research design, approach, and findings.</p> <p>Establish Argument</p> <ul style="list-style-type: none"> • Demonstrating the significance of one's research by explaining the rationale behind the choices made in the research process and logically connecting the findings to one's conclusions or new understandings. <p>Select and Use Evidence</p> <ul style="list-style-type: none"> • Evaluating the significance of the findings, results, or product to the purpose or goal of one's inquiry and strategically choosing such evidence to effectively support claims. <p>Research Design</p> <ul style="list-style-type: none"> • Narrowing a focus of inquiry and identifying an aligned, ethical, feasible approach or method to accomplish the purpose of the research question and/ or project goal. <p>Understand and Analyze Argument</p> <ul style="list-style-type: none"> • Analyzing evidence for what is known about one's topic of inquiry to further narrow (focus) and situate one's research question or project goal. <p>Evaluate Sources and Evidence</p> <ul style="list-style-type: none"> • Evaluating the credibility, relevance, and significance of sources and evidence to the choices made in the inquiry process. <p>Understand and Analyze Context</p> <ul style="list-style-type: none"> • Contextualizing the purpose and significance of one's topic of inquiry within a broader field or discipline. <p>Engage Audience</p> <ul style="list-style-type: none"> • Choosing and employing effective written and oral communication techniques, considering audience, context and purpose to convey and defend conclusions or new understandings. <p>Apply Conventions</p> <ul style="list-style-type: none"> • Choosing and consistently applying an appropriate citation style and effective conventions of writing <p>Reflect</p> <ul style="list-style-type: none"> • Identifying challenges, successes, and moments of insight throughout one's inquiry, which transformed one's own thinking and reasoning. 	1.0
SOC095 SOC096	<p>US HISTORY</p> <p>U.S. History courses provide students with an overview of the history of the United States, examining time periods from discovery or colonialism through World War II or after. These courses typically include a historical overview of political, military, scientific, and social developments. Course content may include a history of the North American peoples before European settlement.</p> <ul style="list-style-type: none"> • Analyzes and evaluates the ways in which the U.S. Constitution and other fundamental documents promote key ideals and principles. • Evaluates the effectiveness of the system of checks and balances during a 	1.0

	<p>particular administration, court, Congress, or legislature.</p> <ul style="list-style-type: none"> • Analyzes and evaluates the causes and effects of U.S. foreign policy on people in the United States and the world in the past or present. • Evaluates the role of the U.S. government in regulating a market economy in the past or present. • Analyzes and evaluates human interaction with the environment in the United States in the past or present. • Analyzes the causes and effects of voluntary and involuntary migration in the United States in the past or present. • Understands how significant themes and developments help to define eras in U.S. history. • The student understands and applies knowledge of historical thinking, chronology, eras, turning points, major ideas, individuals, and themes in United States history in order to evaluate how history shapes the present and future. • The student understands and applies reasoning skills to conduct research, deliberate, form, and evaluate positions through the processes of reading, writing, and communicating. 	
SCI301 SCI302	<p>PHYSICS</p> <p>Physics courses involve the study of the forces and laws of nature affecting matter, such as equilibrium, motion, momentum, and the relationships between matter and energy. The study of physics includes examination of sound, light, and magnetic and electric phenomena.</p> <p>Matter and its Interactions</p> <ul style="list-style-type: none"> • Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms. • Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. • Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles. • Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy. • Analyzes and evaluates how people in the United States have addressed issues involved with the distribution of resources and sustainability in the past or present. • Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs. • Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium. • Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction. • Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay. <p>Motion and Stability: Forces and Interactions</p> <ul style="list-style-type: none"> • Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration. • Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system. • Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision. 	1.0

	<ul style="list-style-type: none"> ● Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects. ● Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current. ● Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials. <p>Energy</p> <ul style="list-style-type: none"> ● Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known. ● Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative positions of particles (objects). ● Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy. ● Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics). ● Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction. <p>Waves and their Applications in Technologies for Information Transfer</p> <ul style="list-style-type: none"> ● Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media. ● Evaluate questions about the advantages of using digital transmission and storage of information. ● Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other. ● Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter. ● Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy. ● Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation. ● Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe. ● Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks. ● Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history. 	
MTH401 MTH402	<p>GEOMETRY</p> <p>Geometry courses, emphasizing an abstract, formal approach to the study of geometry, typically include topics such as properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems, and formal proofs; concepts of</p>	1.0

	<p>congruence, similarity, parallelism, perpendicularity, and proportion; and rules of angle measurement in triangles.</p> <ul style="list-style-type: none"> • Define, represent, describe, and compare transformations in the plane. • Understand congruence as a series of rigid transformations and make constructions. • Prove geometric theorems. • Understand and prove theorems involving similarity and define and solve problems involving right triangles. • Understand and apply theorems of circles, including arc length and areas of sectors. • Use coordinates to prove simple geometric theorems algebraically. • Visualize relationships between 2-D and 3-D objects, model with geometry, and apply trigonometry to general triangles. • Understand and use the rules of probability to interpret data and compute probabilities of compound events. 	
<p>MTH403 MTH404</p>	<p>APPLIED GEOMETRY</p> <p>Students will be able to synthesize information from a variety of instructional and technological sources by applying scientific/mathematical notation. This will include skill drills, hands on practice with calculators, diagnostic (written) testing, group projects, problem solving techniques, unit quizzes, pre and post-tests.</p> <ul style="list-style-type: none"> • The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences. • The student will demonstrate oral, interpersonal, written, and electronic communication and presentation skills and understands how to apply those skills. • The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions. • The student will demonstrate self-advocacy skills by achieving planned, individual goals • The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies. • The student will communicate, participate, and advocate effectively in pairs, small groups, teams, and large groups in order to reach common goals. • The student will demonstrate knowledge of conflict resolution and challenge management. • The student will analyze the complex responsibilities of the leader and follower and demonstrate the ability to both lead and follow <p>Solve Problems</p> <ul style="list-style-type: none"> • Identify and ask significant questions that clarify various points of view and lead to better solutions <p>Access and Evaluate Information</p> <ul style="list-style-type: none"> • Access information efficiently (time) and effectively (sources) • Evaluate information critically and competently • Use information accurately and creatively for the issue or problem at hand <p>Technology</p> <ul style="list-style-type: none"> • Use technology as a tool to research, organize, evaluate and communicate information <p>Manage goals and time</p> <ul style="list-style-type: none"> • Set goals with tangible and intangible success criteria <p>Use the common measurement units for length, area, volume, capacity, and weight in the English system.</p>	<p>1.0</p>

	<ul style="list-style-type: none"> • Use the common measurement units for length, area, volume, capacity, and weight in the metric system. • Convert measurement units from one form to another and carry out calculations that involve various measurement units. • Read measurements taken with common measuring tools. 	
MTH201 MTH202	<p>ALGEBRA 2</p> <p>Algebra II course topics typically include field properties and theorems; set theory; operations with rational and irrational expressions; factoring of 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; and operations with rational and irrational exponents.</p> <ul style="list-style-type: none"> • Find, solve, and produce inverse functions and build a function that models a relationship between two quantities. • Interpret, analyze, build, and solve exponential and logarithmic functions. • Perform arithmetic operations on polynomials and complex numbers, understand the relationship between zeros and factors of polynomials, and use complex numbers in polynomial identities. • Determine roots, write equations, and examine the end behavior of polynomial functions. • Solve, graph, and interpret rational functions and rewrite rational expressions. • Extend the domain of trigonometric functions using the unit circle and model periodic phenomena with trigonometric functions. • Use, graph, and model trigonometric equations and use trigonometric identities. • Identify the effect of transformations on functions, combine standard function types using arithmetic operations, and compose functions. • Understand, use, and compare normal distributions and understand the different methods of sampling. 	1.0
MTH601 MTH602	<p>PRE-CALCULUS</p> <p>Pre-Calculus courses combine the study of Trigonometry, Elementary Functions, Analytic Geometry, and Mathematical Analysis topics as preparation for calculus. Topics typically 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.</p> <ul style="list-style-type: none"> • Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle. • Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle. • Use special triangles to determine geometrically the values of sine, cosine, tangent for $\pi/3$, $\pi/4$ and $\pi/6$, and use the unit circle to express the values of sine, cosine, and tangent for x, $\pi + x$, and $2\pi - x$ in terms of their values for x, where x is any real number. • Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions. • Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline. • Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed. 	1.0

	<ul style="list-style-type: none"> • Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context. • Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant of the angle. • Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems. 	
MTH701 MTH702	<p>CALCULUS</p> <p>Calculus courses include the study of derivatives, differentiation, integration, the definite and indefinite integral, and applications of calculus. Typically, students have previously attained knowledge of pre-calculus topics (some combination of trigonometry, elementary functions, analytic geometry, and mathematical analysis).</p> <p>Interpreting Functions</p> <ul style="list-style-type: none"> • Understand the concept of a function and use function notation • Interpret functions that arise in applications in terms of the context. • Analyze functions using different representations. <p>Building Functions</p> <ul style="list-style-type: none"> • Build a function that models a relationship between two quantities. • Build new functions from existing functions. <p>Linear, Quadratic, and Exponential Models</p> <ul style="list-style-type: none"> • Construct and compare linear, quadratic, and exponential models and solve problems. • Interpret expressions for functions in terms of the situation they model. <p>Trigonometric Functions</p> <ul style="list-style-type: none"> • Extend the domain of trigonometric functions using the unit circle. • Model periodic phenomena with trigonometric functions. • Prove and apply trigonometric identities. 	1.0
PED112	<p>PERSONAL FITNESS</p> <p>Courses in Physical Education—Independent Study, often conducted with instructors as mentors, enable students to explore topics of interest related to physical education. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular sport or activity, to explore a topic in greater detail, or to develop more advanced skills.</p> <p>Students will co-develop a fitness program with a PE teacher to fulfill state requirements for fitness.</p> <ul style="list-style-type: none"> • Students are required to complete pre- and post-fitness tests after school, and complete written projects. • Students will log 82.5 hours of fitness activity. • It is highly recommended (but not required), to have a gym membership, a certified outside coach, or a personal trainer to supervise hours logged. 	0.5

*May fulfill a laboratory science requirement.

Twelfth Grade Courses & Standards

<u>Course</u>	<u>Description</u>	<u>Credits</u>
ENG411 ENG412	<p>ENGLISH 12</p> <p>English/Language Arts IV (12th grade) courses blend composition and literature into a cohesive whole as students write critical and comparative analyses of selected literature, continuing to develop their language arts skills. Typically, students primarily write multi-paragraph essays, but they may also write one or more major research papers.</p> <p>Emphasis on Literary Analysis of American and European Fiction</p> <ul style="list-style-type: none"> ● Cite compelling textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. ● Determine two or more themes or central ideas of a literary text and analyze their development over the course of the text. ● Analyze how an author's chosen structure of specific parts of a literary text contribute to its overall structure and meaning as well as its aesthetic impact. ● Integrate and evaluate multiple sources of information presented in different media or formats in order to address a question or solve a problem. ● Write arguments to support claims using valid reasoning and relevant and sufficient evidence. ● Produce clear and coherent writing appropriate to task, purpose, and audience ● Conduct research projects to answer a question or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. ● Initiate and participate effectively in a range of collaborative discussions with diverse partners on topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively. ● Present information, findings, and supporting evidence, conveying a clear and distinct perspective appropriate to purpose, audience, and a range of formal and informal tasks. ● Apply knowledge of language to understand how language functions in different contexts, ● Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level. 	1.0
MTH601 MTH602	<p>PRE-CALCULUS</p> <p>Pre-Calculus courses combine the study of Trigonometry, Elementary Functions, Analytic Geometry, and Mathematical Analysis topics as preparation for calculus. Topics typically 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.</p> <ul style="list-style-type: none"> ● Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle. ● Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle. 	1.0

	<ul style="list-style-type: none"> • Use special triangles to determine geometrically the values of sine, cosine, tangent for $\pi/3$, $\pi/4$ and $\pi/6$, and use the unit circle to express the values of sine, cosine, and tangent for x, $\pi + x$, and $2\pi - x$ in terms of their values for x, where x is any real number. • Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions. • Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline. • Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed. • Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context. • Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant of the angle. • Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems. 	
MTH701 MTH702	<p>CALCULUS</p> <p>Calculus courses include the study of derivatives, differentiation, integration, the definite and indefinite integral, and applications of calculus. Typically, students have previously attained knowledge of pre-calculus topics (some combination of trigonometry, elementary functions, analytic geometry, and mathematical analysis).</p> <p>Interpreting Functions</p> <ul style="list-style-type: none"> • Understand the concept of a function and use function notation • Interpret functions that arise in applications in terms of the context. • Analyze functions using different representations. <p>Building Functions</p> <ul style="list-style-type: none"> • Build a function that models a relationship between two quantities. • Build new functions from existing functions. <p>Linear, Quadratic, and Exponential Models</p> <ul style="list-style-type: none"> • Construct and compare linear, quadratic, and exponential models and solve problems. • Interpret expressions for functions in terms of the situation they model. <p>Trigonometric Functions</p> <ul style="list-style-type: none"> • Extend the domain of trigonometric functions using the unit circle. • Model periodic phenomena with trigonometric functions. • Prove and apply trigonometric identities. 	1.0
MTH801 MTH802	<p>STATISTICS*</p> <p>Statistics courses involve the major concepts and methods used to collect, analyze, and draw conclusions from data. Topics typically include populations and samples, measures of central tendency and variability, hypothesis testing, presentation, and making statistical inferences.</p> <p>Interpreting Categorical and Quantitative Data</p> <ul style="list-style-type: none"> • Summarize, represent, and interpret data on a single count or measurement variable • Summarize, represent, and interpret data on two categorical and quantitative variables • Interpret linear models <p>Making Inferences and Justifying Conclusions</p> <ul style="list-style-type: none"> • Understand and evaluate random processes underlying statistical experiments • Make inferences and justify conclusions from sample surveys, experiments and observational studies 	1.0

	<p>Conditional Probability and the Rules of Probability</p> <ul style="list-style-type: none"> • Understand independence and conditional probability and use them to interpret data • Use the rules of probability to compute probabilities of compound events in a uniform probability model <p>Using Probability to Make Decisions</p> <ul style="list-style-type: none"> • Calculate expected values and use them to solve problems • Use probability to evaluate outcomes of decisions 	
MTH501 MTH502	<p>CONSUMER MATHEMATICS*</p> <p>This project-based and hands-on course designed for the older student will help learners take charge of their personal finances while preparing them for independence after high school.</p> <ul style="list-style-type: none"> • Focus on knowledge, skills, attitudes, and behaviors associated with the management of family economic. • Financial education will include the application of simulated “real-life” situations. • Topics include: decision-making, goal setting, paychecks, taxes, budgeting, credit and debit, saving, and investing. 	1.0

*Four-year universities require Math or an Algebra-based Science class during Senior year even if graduation requirements are met.

ELECTIVES AND PROGRAM PATHWAYS

BUSINESS & MARKETING

BUS101	<p>BUSINESS 1</p> <p>Business Law courses emphasize legal concepts that are relevant to business and business organizations. Topics examined in these courses typically include contracts, buying/renting property, installment buying, insurance, buyer/seller relationships, negotiable instruments, employment, taxes, insurance, commercial papers, legal organizational structures, and consumer liabilities.</p> <p>Standards for Accounting</p> <ul style="list-style-type: none">• Read, interpret, and understand financial information• Apply accounting principles• Understand how accounting systems provide information• Recognize different uses of accounting• Understand the dynamic nature of business environments <p>Standards for Business Law</p> <ul style="list-style-type: none">• Understanding intellectual property law• Understanding contract law• Understanding digital privacy• Understanding computer-specific crimes and torts <p>Standards for Communication</p> <ul style="list-style-type: none">• Understanding communication foundations• Recognizing communication in social situations• Knowing how to communicate in the workplace• Understanding technological communication <p>Standards for Computation</p> <ul style="list-style-type: none">• Solving math problems• Analyzing data• Applying decision-making skills	0.5 CTE
BUS201	<p>BUSINESS 2 (BUSINESS 1 Prerequisite)</p> <p>Business Economics courses integrate economic principles (such as free market economy, consumerism, and the role of the U.S. government within the economic system) with entrepreneurship/business concepts (such as marketing principles, business law, and risk).</p> <p>Standards for Economics & Personal Finance</p> <ul style="list-style-type: none">• Opportunity costs• Productivity• Economic systems• Money interdependence• Prices• Supply and demand• Consumers, citizens, and governments <p>Standards for Entrepreneurship</p> <ul style="list-style-type: none">• Understanding technology's importance to business• Understanding the variety of electronic tools to perform business tasks• Using the Internet to promote and maximize business <p>Standards for Information Technology</p> <ul style="list-style-type: none">• Understanding IT's central role in every business• Understanding the value and impact of IT• Pragmatically solving technological problems	0.5 CTE

	<ul style="list-style-type: none"> • Developing interpersonal and service skills • Behaving ethically, legally, and responsibly • Respecting intellectual property, privacy, and security Standards for International Business <ul style="list-style-type: none"> • Understanding how political policies and economic practices relate in different countries • Learning how communication influences business relations • Conceptualizing the global business environment • Understanding international finance, management, and marketing • Identifying different forms of business ownership 	
BUS301	MARKETING (BUSINESS 2 Prerequisite) Marketing courses focus on the wide range of factors that influence the flow of goods and services from the producer to the consumer. Topics may include, but are not limited to, market research, the purchasing process, distribution systems, warehouse and inventory control, salesmanship, sales promotions, shoplifting and theft control, business management, and entrepreneurship. Human relations, computers, and economics are sometimes covered as well. <ul style="list-style-type: none"> • Demonstrate knowledge of business and marketing related competencies on various modes of assessment. • Identify market segments and develop strategies to reach each segment through creation of data-gathering tools and presentation of findings in verbal and written communication. • Participate effectively in market simulations examining how decisions impact the market. • Develop sales proposals incorporating the six steps of selling. • Create products and design advertising layouts and campaigns for presentation to a large audience. • Apply customer service knowledge by designing and delivering an employee training workshop. • Demonstrates business and service acumen through various role play scenarios. 	0.5 CTE
ART401	VISUAL COMMUNICATIONS DESIGN (RSCH DESIGN & ENGINEERING 1 AND 2 Prerequisites) Formerly known as Graphic Design, Visual Communications Design courses emphasize applying fundamental processes of artistic expression through the exploration of the purposeful arrangement of images, symbols, and text to communicate a message. These courses may include investigations of how technology influences the creation of graphic and digital designs and study historical and contemporary visual communications design. These courses also provide instruction in the process of responding to their own art and that of others including master designers through analysis, critique, and interpretation for the purpose of reflecting on and refining work.	0.5 CTE
INT101	PRE-INTERNSHIP A seminar-based course designed to prepare students to identify potential internship sites, prepare resumes tailored for the sites, learn and practice interview skills, and practice self-advocacy and problem-solving skills for the world of work.	0.5 CTE
INT201	INTERNSHIP (PRE-INTERNSHIP Prerequisite) Earn school credit for interning outside of school. Students will receive credit based on their performance at the work or internship site, completion of school assignments and paperwork related to the program, and a minimum of 90 or 180 hours (depends on	0.5 CTE

	other CTE courses) of documented time per semester credit. This course may be started anytime during the school year.	
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COMPUTER SCIENCE

TEC006	<p>PYTHON 1</p> <p>Computer Programming—Other Language courses provide students with the opportunity to gain expertise in computer programs using languages other than those specified (such as Pascal, FORTRAN, Python, or emerging languages). As with other computer programming courses, the emphasis is on how to structure and document computer programs, using problem-solving techniques. As students advance, they learn how to best utilize the features and strengths of the language being used.</p> <p>DATA</p> <ul style="list-style-type: none"> • Write simple linear programs that run from top to bottom • Recognize values from various data types and can use the types that are appropriate for a given applications <p>DECISIONS</p> <ul style="list-style-type: none"> • Write non-linear programs that skip code with conditionals and return to previous code with loops • Access code outside their program using libraries • Deconstruct code in order to list features, debug, and analyze the program structure <p>DRAWING</p> <ul style="list-style-type: none"> • Create procedural drawing and animation programs using shape and colors • Use coordinates to place and move elements on screen • Use mouse and keyboard input in their programs • Track and standardize time in their programs <p>LISTS</p> <ul style="list-style-type: none"> • Use lists to store many values at once • Use for-loops to create and look through lists 	0.5 CTE
TEC007	<p>PYTHON 2 (PYTHON 1 Prerequisite)</p> <p>SPRITES</p> <ul style="list-style-type: none"> • Import an outside image into a program • create and manipulate sprite animations using sprite sheets • List some sprite fields and manipulate their values • Handle collisions between sprites • Handle collisions between sprites and mouse or keyboard input • Use sprites in lists to create efficient programs with a large number of sprites <p>FUNCTIONS</p> <ul style="list-style-type: none"> • Create custom functions that perform actions and return values • Reorganize their code using functions to make it more efficient and readable • Store pairs of data in dictionaries • Look up information in dictionaries • Use dictionaries to represent a complex object • Describe the benefits of organizing and segmenting code • Identify when an argument is passed by reference and can be modified within a function <p>DICTIONARIES</p> <ul style="list-style-type: none"> • Create dictionary data structures • Use dictionaries to represent a variety of related data as an object • Organize data into a program using dictionaries • Access information from a dictionary object 	0.5 CTE

	<ul style="list-style-type: none"> • Compare and contrast the benefits and the limitations of dictionaries compared to lists 	
TEC008	WEB DESIGN (PYTHON 1 Prerequisite) Web Design courses explore the creative and conceptual aspects of designing and developing interactive, multimedia websites that emphasize the principles of graphic design, interactivity, and usability. Students learn about a variety of visual, navigational, and structural approaches to navigation systems, visual hierarchy, basic animations, image preparation and file transferring protocols. Topics may include conceptual development and structure, interactivity, and design aesthetics; appreciation and analysis development, construction, and programming of virtual, multimedia, and interactive experiences; their applications in Internet communications; and contextual, cultural, and historical aspects and considerations.	0.5 CTE
TEC009	COMPUTER GAMING & DESIGN Computer Gaming and Design courses prepare students to design computer games by studying design, animation, artistic concepts, digital imaging, coding, scripting, multimedia production, and game play strategies. Advanced course topics include, but are not limited to, level design, environment and 3D modeling, scene and set design, motion capture, and texture mapping.	0.5 CTE
TEC100 TEC101	AP COMPUTER SCIENCE Following the College Board's suggested curriculum designed to mirror college-level computer science courses, AP Computer Science A courses emphasize object-oriented programming methodology with a focus on problem solving and algorithm development. These courses cover such topics as object-oriented program design; program implementation; program analysis; standard data structures; standard algorithms; and the ethical and social implications of computing systems.	1.0 CTE
TEC200	COMPUTER SCIENCE SEMINAR Seminar courses vary widely, but typically offer a small peer group the opportunity to investigate areas of interest. Course objectives may include improvement of research and investigatory skills, presentation skills, interpersonal skills, group process skills, and problem-solving and critical-thinking skills. Seminars aimed at juniors and seniors often include a college and career exploration and planning component.	0.5 CTE
TEC500	PRE-INTERNSHIP SEMINAR Seminar courses vary widely, but typically offer a small peer group the opportunity to investigate areas of interest. Course objectives may include improvement of research and investigatory skills, presentation skills, interpersonal skills, group process skills, and problem-solving and critical-thinking skills. Seminars aimed at juniors and seniors often include a college and career exploration and planning component.	0.5 CTE
TEC501	INTERNSHIP (Repeatable for Credit) Internship courses provide students with work experience in a field related to their interests. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace. Note: if the particular subject area is known, use the code associated with the Workplace Experience course within that subject area.	0.5 CTE

ENGINEERING / FABRICATION & DESIGN

TEC011	GRAPHIC TECHNOLOGY 1 - ADOBE ILLUSTRATOR Graphic Technology courses help students apply artistic and computer techniques to the interpretation of technical and commercial concepts. Topics covered may include computer assisted art and design, printmaking, concept sketching, technical drawing, color theory, imaging, studio techniques, still life modeling, and commercial art business operations. Advanced topics may include topographic arrangements of print and/or electronic graphic and textual products, printing and lithographic equipment and operations, digital imaging, print preparation, desktop publishing and web page design.	0.5 CTE
TEC012	GRAPHIC TECHNOLOGY 2 - ADOBE PHOTOSHOP Graphic Technology courses help students apply artistic and computer techniques to the interpretation of technical and commercial concepts. Topics covered may include computer assisted art and design, printmaking, concept sketching, technical drawing, color theory, imaging, studio techniques, still life modeling, and commercial art business operations. Advanced topics may include topographic arrangements of print and/or electronic graphic and textual products, printing and lithographic equipment and operations, digital imaging, print preparation, desktop publishing and web page design.	0.5 CTE
TEC415	RESEARCH, DESIGN & ENGINEERING 1 Engineering Design courses offer students experience in solving problems by applying a design development process. Often using solid modeling computer design software, students develop, analyze, and test product solutions models as well as communicate the features of those models. <ul style="list-style-type: none"> • CAD Skills: Design parts for workshop constructions using engineering sketches and Inventor PRO 2019. Combine parts into personal assemblies. Include parts from external sources. • CAD Skills: Design more complex parts for workshop constructions using Inventor PRO 2019. Combine parts into large team based assemblies with concurrent design iterations. Apply fundamentals of blueprint documentation. • Digital Manufacturing: Basics of CAD / CAM process to construct parts using CNC tools. Demonstrate on 3D Print and Laser Cut part production. • Digital Manufacturing: Continued CAD / CAM constructing parts using CNC tools. Demonstrate on CNC Router table. • Woodworking: Learn wood shop equipment through installation of equipment. • Develop tools training resources such as graphic instructions, user guides and training videos. • SharedWorkspace Management: Create safety manuals and certification tests for general shop and individual tools, Establish and follow procedures to maintain a clean and safe workplace. • SharedWorkspace Management: More extensive safety manuals for individual tools, Analysis and iteration of procedures to maintain a clean and safe workplace. Develop tools training resources such as graphic instructions, user guides and training videos. • Engineering calculations. Calculate material sizes, layouts and costs appropriate to a design challenge. Adjust and adapt based on actual production. • Engineering calculations: Calculate forces, speeds and energy in simple mechanical systems • Generate ideas and create original works for personal and group use using a variety of shop tools and materials • Production: Create products per the design objective and process. Safety certify 	0.5 CTE

	and practice on shop tools and materials needed for construction.	
TEC416	RESEARCH, DESIGN & ENGINEERING 2 (RSCH DESIGN ENG 1 Prerequisite) Engineering Design and Development courses provide students with the opportunity to apply engineering research principles as they design and construct a solution to an engineering problem. Students typically develop and test solutions using computer simulations or models but eventually create a working prototype as part of the design solution.	0.5 CTE
TEC417	RESEARCH, DESIGN & ENGINEERING 3 (RSCH DESIGN ENG 2 Prerequisite) Engineering—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to engineering. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.	0.5 CTE
TEC418	WOODWORKING & FABRICATION Woodworking courses introduce students to the various kinds of woods used in industry and offer experience in using selected woodworking tools. Students design and construct one or more projects and may prepare a bill of materials. Correct and safe use of tools and equipment is emphasized. As students advance, they focus on learning the terminology necessary to use power tools successfully, developing skills to safely use these tools in the workshop and becoming familiar with various kinds of wood-finishing materials. Advanced students typically design a project, prepare bills of materials, construct, and finish proposed projects.	0.5 CTE
TEC419	METALWORKING & FABRICATION Metalworking courses introduce students to the physical and chemical properties of various metals and the tools and equipment used to manipulate metal and form it into products. Students will develop planning, layout, and measurement skills; gain experience in cutting, bending, forging, casting, and/or welding metal; complete projects according to blueprints or other specifications; and may also learn how to polish and finish metals. Correct use of metalworking tools and equipment is stressed.	0.5 CTE
TEC500	PRE-INTERNSHIP SEMINAR Seminar courses vary widely, but typically offer a small peer group the opportunity to investigate areas of interest. Course objectives may include improvement of research and investigatory skills, presentation skills, interpersonal skills, group process skills, and problem-solving and critical-thinking skills. Seminars aimed at juniors and seniors often include a college and career exploration and planning component.	0.5 CTE
TEC501	INTERNSHIP (Repeatable for Credit) Internship courses provide students with work experience in a field related to their interests. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace. Note: if the particular subject area is known, use the code associated with the Workplace Experience course within that subject area.	0.5 CTE

FINE & PERFORMING ARTS

<u>Course</u>	<u>Description</u>	<u>Credits</u>
MUS146	<p>MUSIC PRODUCTION 1</p> <p>Technology/Electronic Music courses emphasize current technology as a means to create, record, mix, and otherwise interact with music and music media. These courses focus on experimenting with electronic music technology as part of the process for creating music.</p> <ul style="list-style-type: none"> • Generate melodic, rhythmic, and harmonic ideas for compositions or improvisations using digital tools. • Select melodic, rhythmic, and harmonic ideas to develop into a larger work using digital tools and resources. • Drawing on feedback from teachers and peers, develop and implement strategies to improve and refine the technical and expressive aspects of draft compositions and improvisations. • Share compositions or improvisations that demonstrate a proficient level of musical and technological craftsmanship as well as the use of digital to explain and support an interpretation of the expressive intent of musical selections based on treatment of the elements of music, digital and electronic features, and purpose. ols and resources in developing and organizing musical ideas. • Develop and explain the criteria used for selecting a varied repertoire of music based on interest, music reading skills, and an understanding of the performer's technical and technological skill. • Describe how context, structural aspects of the music, and digital media/tools inform prepared and improvised performances. • Demonstrate how understanding the context, expressive challenges, and use of digital tools in a varied repertoire of music influence prepared or improvised performances. • Identify and implement rehearsal strategies to improve the technical and expressive aspects of prepared and improvised performances in a varied repertoire of music. • Using digital tools, demonstrate attention to technical accuracy and expressive qualities in prepared and improvised performances of a varied repertoire of music. • Demonstrate an understanding of the context of music through prepared and improvised performances. • Cite reasons for choosing music based on the use of the elements of music, digital and electronic aspects, and connections to interest or purpose. • Explain how knowledge of the structure (repetition, similarities, contrasts), technological aspects, and purpose of the music informs the response. • Evaluate music using criteria based on analysis, interpretation, digital and electronic features, and personal interests. • Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music. • Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life. 	0.5 ART
MUS147	<p>MUSIC PRODUCTION 2 (MUSIC PRODUCTION 1 Prerequisite)</p> <ul style="list-style-type: none"> • Generate melodic, rhythmic, and harmonic ideas for compositions and improvisations that incorporate digital tools, resources, and systems. • Select, develop, and organize multiple melodic, rhythmic, and harmonic ideas to develop into a larger work that exhibits unity, variety, complexity, and coherence using digital and analog tools, resources, and systems. • Develop and implement varied strategies and apply appropriate criteria to improve 	0.5 ART

	<p>and refine the technical and expressive aspects of draft compositions and improvisations.</p> <ul style="list-style-type: none"> • Share a portfolio of musical creations representing varied styles and genres that demonstrates an advanced level of musical and technological craftsmanship as well as the use of digital and analog tools, resources, and systems in developing and organizing musical ideas. • Develop and apply criteria to select varied programs to study and perform based on interest, an understanding of the theoretical and structural characteristics, as well as expressive challenges in the music, and the performer's technical skill using digital tools, resources, and systems. • Examine, evaluate, and critique how context, theoretical and structural aspects of the music, and digital media/tools inform and influence prepared and improvised performances. • Demonstrate how understanding the style, genre, context, and integration of digital technologies in a varied repertoire of music informs and influences prepared and improvised performances and their ability to connect with audiences. • Apply appropriate criteria as well as feedback from multiple sources and develop and implement varied strategies to improve and refine the technical and expressive aspects of prepared and improvised performances in varied programs of music. • Integrating digital and analog tools and resources, demonstrate an understanding of and attention to technical accuracy and expressive qualities of the music in prepared and improvised performances of a varied repertoire of music representing diverse cultures, styles, genres, and historical periods. • Demonstrate an ability to connect with audience members before, and engaging with and responding to them during prepared and improvised performances. • Select, describe, and compare a variety of musical selections based on characteristics and knowledge of the music, understanding of digital and electronic aspects, and the purpose and context of the works. • Demonstrate and justify how an analysis of the structural characteristics, context, and technological and creative decisions, informs interest in and response to the music. • Examine and cite research and multiple sources to connect the influence of the treatment of the elements of music, digital and electronic features, context, purpose, and other art forms to the expressive intent of musical works. • Develop and justify the evaluation of a variety of music based on established and personally-developed criteria, digital, electronic and analog features, and understanding of purpose and context. • Demonstrate how interests, knowledge, and skills relate to personal choices and intent when creating, performing, and responding to music. • Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life. 	
MUS107	<p>INTRODUCTION TO GUITAR 1</p> <p>Guitar courses provide students an introduction to, and refine the fundamentals of, music and guitar literature and techniques, such as strumming and chords and may offer instruction in more advanced techniques. These courses may include bass, ukelele and other plucked string instruments. Formal and informal performances are typically included as well as experiences in creating and responding to music.</p> <ul style="list-style-type: none"> • Select, analyze and interpret artistic work for presentation. • Demonstrate, using music reading skills where appropriate, how knowledge of formal aspects in musical works inform prepared or improvised performances. • Identify expressive qualities in a varied repertoire of music that can be demonstrated through prepared and improvised performances. • Develop and refine artistic techniques and work for presentation. 	0.5 ART

	<ul style="list-style-type: none"> • Convey meaning through the presentation of artistic work. • Perceive and analyze artistic work. • Interpret intent and meaning in artistic work. 	
MUS108	<p>INTERMEDIATE GUITAR 2 (INTRO TO GUITAR 1 or AUDITION Prerequisite)</p> <ul style="list-style-type: none"> • Select, analyze and interpret artistic work for presentation. • Demonstrate, using music reading skills where appropriate, how knowledge of formal aspects in musical works inform prepared or improvised performances. • Identify expressive qualities in a varied repertoire of music that can be demonstrated through prepared and improvised performances. • Develop and refine artistic techniques and work for presentation. • Convey meaning through the presentation of artistic work. • Perceive and analyze artistic work. • Interpret intent and meaning in artistic work. 	0.5 ART
MUS251 MUS252	<p>SELECT VOCAL ENSEMBLE (AUDITION)</p> <p>Vocal Ensemble courses help students develop vocal techniques and refine their ability to sing parts in small ensembles (e.g., madrigal, barber shop, gospel). Course goals may include helping students develop their solo singing ability and emphasize one or several ensemble literature styles. These ensembles may include both instrumental and vocal music and include experiences in creating and responding to music.</p>	0.5 ART
MUS161 MUS162	<p>SELECT STAGE BAND (AUDITION)</p> <p>Formerly known as Instrumental Ensemble, Small Ensemble courses help students perform a variety of musical styles (e.g., traditional chamber music, jazz, and rock). At the same time, these courses help cultivate students' technique on instruments appropriate to the style(s) performed—brass, woodwind, string, percussion instruments, and/or electronic and provide experiences in creating and responding to music. Courses typically range in size from 2 to 20 performers.</p>	0.5 ART
ART101	<p>FINE ARTS 1</p> <p>Visual Arts—Drawing/Painting courses focus on the inter-relationships that occur between drawing and painting using a variety of media and techniques, emphasizing observation and interpretation of the visual environment. These courses typically include applying the elements of art and principles of design, along with a study of art and artists from a worldwide perspective, and instruction in the critique process. Advanced courses may encourage students to refine their creative process and develop their own artistic styles following and breaking from traditional conventions.</p> <p>Creating</p> <ul style="list-style-type: none"> • Individually or collaboratively formulate new creative problems based on student's existing artwork. • Choose from a range of materials and methods of traditional and contemporary artistic practices to plan works of art and design. • Through experimentation, practice, and persistence, demonstrate acquisition of skills and knowledge in a chosen art form. • Demonstrate awareness of ethical implications of making and distributing creative work. • Redesign an object, system, place, or design in response to contemporary issues. • Engage in constructive critique with peers, then reflect on, reengage, revise, and refine works of art and design in response to personal artistic vision. <p>Presenting</p> <ul style="list-style-type: none"> • Analyze, select, and critique personal artwork for a collection or portfolio 	0.5 ART

	<p>presentation.</p> <ul style="list-style-type: none"> • Evaluate, select, and apply methods or processes appropriate to display artwork in a specific place. • Make, explain, and justify connections between artists or artwork and social, cultural, and political history. <p>Responding</p> <ul style="list-style-type: none"> • Recognize and describe personal aesthetic and empathetic responses to the natural world and constructed environments. • Evaluate the effectiveness of an image or images to influence ideas, feelings, and behaviors of specific audiences. • Identify types of contextual information useful in the process of constructing interpretations of an artwork or collection of works. • Determine the relevance of criteria used by others to evaluate a work of art or collection of works. <p>Connecting</p> <ul style="list-style-type: none"> • Utilize inquiry methods of observation, research, and experimentation to explore unfamiliar subjects through artmaking. • Compare uses of art in a variety of societal, cultural, and historical contexts and make connections to uses of art in contemporary and local contexts. 	
ART201	<p>FINE ARTS 2 (FINE ARTS 1 Prerequisite)</p> <p>Visual Arts—Sculpture courses promote creative expression through three-dimensional works. These courses explore representational and abstract sculpture through subtractive (carving), additive (modeling), and assemblage techniques in one or more media. Visual Arts—Sculpture courses typically include the production of representational and abstract sculptures while incorporating elements of art and principles of design, along with a study of historical and contemporary sculpture and sculptors from a worldwide perspective. These courses also provide instruction in the process of responding to art through analysis, critique, and interpretation for the purpose of reflecting on and refining work.</p> <p>Creating</p> <ul style="list-style-type: none"> • Visualize and hypothesize to generate plans for ideas and directions for creating art and design that can affect social change. • Choose from a range of materials and methods of traditional and contemporary artistic practices, following or breaking established conventions, to plan the making of multiple works of art and design based on a theme, idea, or concept. • Experiment, plan, and make multiple works of art and design that explore a personally meaningful theme, idea, or concept. • Demonstrate understanding of the importance of balancing freedom and responsibility in the use of images, materials, tools, and equipment in the creation and circulation of creative work. • Reflect on, re-engage, revise, and refine works of art or design considering relevant traditional and contemporary criteria as well as personal artistic vision. • Demonstrate in works of art or design how visual and material culture defines, shapes, enhances, inhibits, and/or empowers people's lives. <p>Presenting</p> <ul style="list-style-type: none"> • Critique, justify, and present choices in the process of analyzing, selecting, curating, and presenting artwork for a specific exhibit or event. • Investigate, compare, and contrast methods for preserving and protecting art. • Curate a collection of objects, artifacts, or artwork to impact the viewer's understanding of social, cultural, and/or political experiences. <p>Responding</p> <ul style="list-style-type: none"> • Analyze how responses to art develop over time based on knowledge of and experience with art and life. 	0.5 ART

	<ul style="list-style-type: none"> • Determine the commonalities within a group of artists or visual images attributed to a particular type of art, timeframe, or culture. • Analyze differing interpretations of an artwork or collection of works in order to select and defend a plausible critical analysis. • Construct evaluations of a work of art or collection of works based on differing sets of criteria. <p>Connecting</p> <ul style="list-style-type: none"> • Synthesize knowledge of social, cultural, historical, and personal life with art-making approaches to create meaningful works of art or design. • Appraise the impact of an artist or a group of artists on the beliefs, values, and behaviors of a society. 	
ART301	<p>MULTIMEDIA ARTS & FILM</p> <p>Formerly known as Computer-Assisted Art, Multimedia Art courses emphasize applying the fundamental processes of artistic expression for the purpose of creating multimedia productions that explore contemporary social, cultural, and political issues. These courses include the history and development of multiple forms of media including a combination of text, audio, still images, animation, video, and interactive content. These courses provide students with the opportunity to develop foundational skills and knowledge while they also become more adept in cinema, video, digital live production, and electronic time-based media. Students engage in critique of their multimedia work, that of others, and the multimedia video, digital, and live production work of artists for the purpose of reflecting on and refining work for presentation.</p>	0.5 CTE

WORLD LANGUAGES

SPA101 SPA102	<p>SPANISH 1</p> <p>Designed to introduce students to Spanish language and culture, Spanish I courses prepare students to communicate authentically in Spanish by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information on a variety of topics. They introduce the relationships among the products, practices, and perspectives of Spanish-speaking cultures.</p> <ul style="list-style-type: none"> • Student identifies vocabulary and grammar usage in a text. • Student reads a text for comprehension, effectively employing reading supports to comprehend a text. • Student writes to show use of grammar and vocabulary in context. • Student writes to present or summarize knowledge on a topic. • Student writes to give an opinion on a topic or respond to an authentic audience through emails, journals, reflective writing, etc. • Student appropriately responds to questions in conversations with peers and the teacher. • Student appropriately responds to audio texts (video/audio from textbook and/or podcasts and audio/video clips). • Student speaks conversationally with peers and teachers. • Student formally presents information, using correct vocabulary and grammar, to peers and teachers. 	1.0
SPA201 SPA202	<p>SPANISH 2</p> <p>Spanish II courses build upon skills developed in Spanish I, preparing students to communicate authentically in Spanish by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking,</p>	1.0

	<p>writing) information on concrete topics. Spanish II courses introduce the relationships among the products, practices, and perspectives of Spanish-speaking cultures.</p> <ul style="list-style-type: none"> • Student identifies vocabulary and grammar usage in a text. • Student reads a text for comprehension, effectively employing reading supports to comprehend a text. • Student writes to show use of grammar and vocabulary in context. • Student writes to present or summarize knowledge on a topic. • Student writes to give an opinion on a topic or respond to an authentic audience through emails, journals, reflective writing, etc. • Student appropriately responds to questions in conversations with peers and the teacher. • Student appropriately responds to audio texts (video/audio from textbook and/or podcasts and audio/video clips). • Student speaks conversationally with peers and teachers. • Student formally presents information, using correct vocabulary and grammar, to peers and teachers. 	
SPA301 SPA302	<p>SPANISH 3</p> <p>Spanish III courses prepare students to communicate authentically in Spanish by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information, concepts, and ideas on a variety of topics, including connections to other subject areas. These courses expand students' knowledge of relationships among the products, practices, and perspectives of Spanish-speaking countries and cultures.</p>	1.0
CHN101 CHN102	<p>MANDARIN CHINESE 1</p> <p>Designed to introduce students to Chinese language and culture, Chinese I courses prepare students to communicate authentically in Chinese by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information on a variety of topics. They introduce the relationships among the products, practices, and perspectives of Chinese-speaking cultures.</p> <ul style="list-style-type: none"> • Student will learn simplified characters; traditional characters will be introduced as extension. • Student develops basic vocabulary and sentence structure. • Student develops competence in four basic skills: listening, speaking, reading, and writing. • Student will apply learning through a variety of class activities. • Student will be exposed to aspects of Chinese culture, customs, arts, geography, history, and calligraphy. 	1.0
CHN201 CHN202	<p>MANDARIN CHINESE 2</p> <p>Chinese II courses build upon skills developed in Chinese I, preparing students to communicate authentically in Chinese by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information on concrete topics. Chinese II courses introduce the relationships among the products, practices, and perspectives of Chinese-speaking cultures.</p> <ul style="list-style-type: none"> • Student will use more sophisticated vocabulary and grammatical structures. • Student will explore situational topics to connect their Mandarin learning to their daily life. • Student will be prepared for more advanced language usage (available Fall 2020). 	1.0
CHN301	<p>MANDARIN CHINESE 3</p>	1.0

CHN302	<p>Chinese III courses prepare students to communicate authentically in Chinese by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information, concepts, and ideas on a variety of topics, including connections to other subject areas. These courses expand students' knowledge of relationships among the products, practices, and perspectives of Chinese-speaking countries and cultures.</p> <ul style="list-style-type: none"> • Student will have exposure to a variety of cultural aspects which informs the Mandarin language (available Fall 2021). 	
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GENERAL INFORMATION

GRADING SYSTEM

Discovery High School's instruction and assessment are aligned with national, state, and local academic standards. Assessments are scored using a 4-point scale. Scores on individual assessments are calculated into a single 1 - 4 number score for the standard. Scores for each standard are then averaged into a single 1 - 4 number score for the course, which is then converted into a letter grade using the following conversion scale - note that we do not assign minuses to course grades.

Letter Grade	Score Range
A	3.2 - 4.0
B+	3.0 - 3.19
B	2.6 - 2.99
C+	2.4 - 2.59
C	2.0 - 2.39
D+	1.8 - 1.99
D	1.4 - 1.79
F	0.0 - 1.39

DHS uses the SPI Grading Scale evaluating pluses and for GPA and does not use another scale for AP or Honors classes. Our GPA is unweighted and all graded classes are equal in point value.

OUR PHILOSOPHY on STANDARDS BASED LEARNING

- We believe that all students are curious and capable individuals who deserve meaningful, authentic, engaging, and challenging curriculum and instruction.
- We believe that scores and rubrics must clearly communicate to all stakeholders including, but not limited to, teachers, students, guardians, community and colleges a student's skills and understandings in a given area of study.
- We believe that students enter learning at different levels, learn in different ways at different times, and should have various opportunities to demonstrate their ongoing learning.

Best Practices

1. Standards Based Learning and Assessment is student centered and learner-friendly.

We value the learning process, growth over time, individual student strengths, and accurate reporting. Standards Based Learning and Assessment allows us to honor these values in a way that the traditional 100 point grade scale does not.

2. Students earn a number score for assessments, but a letter semester grade for the course

All teachers score use a 4-point scale when scoring Learning Opportunities and Assessed Events. Teachers may choose to weigh a particular Assessed Event based on complexity and level of skill required.

No Evidence	0	Student has shown no evidence of skill or understanding.
	.5	With help, partial success at the 2 content or skills, but not the 3 content or skills.
Does Not Meet	1	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.
	1.5	Partial success with the 2 content or skills, but major errors or omissions with the 3.0 content or skills.
Approaching	2	There are no major errors or omissions regarding the simpler details and processes; however, major errors or omissions regarding the more complex ideas and processes.
	2.5	No major errors or omissions regarding 2 content or skills, partial knowledge or success at 3 content or skills.
Meets the Standard	3	The student demonstrates proficiency at the standard and exhibits no major errors or omissions.
	3.5	In addition to scoring a 3, in depth inferences and applications with partial success.
Advanced Understanding	4	In addition to scoring a 3, student demonstrates mastery of the learning goal and is able to apply and transfer learning with depth and complexity OR repeatedly demonstrates proficiency at a given standard.

3. Early assessments of a standard count less than later assessments of that standard

We understand that students learn challenging concepts and skills over time and that with continued instruction and practice, their ability will improve and that improvement over time should be reflected in their course grade. The most recent assessment of a standard counts as 75% of the overall average. Previous assessments contribute a total of 25% to the overall average.

4. All assessed standards are important to determining a final course letter grade

A course grade is determined by averaging the 1 - 4 number scores for each of the assessed standards into a single number score, which is then converted to a letter grade.

5. Students may reassess to demonstrate greater proficiency within the semester

Students may fully grasp concepts and develop skills at different times. Standards based learning allows teachers to continue to provide support to students as they learn - even after an assessment has taken place. Students can reassess and demonstrate greater understanding without penalty.

LEARNING OPPORTUNITIES and ASSESSED EVENTS

Learning opportunities include homework, practice problems, most group and pair work, and other activities as determined by the teacher. Although they do not “count” in the grade book, learning opportunities provide the instruction and practice necessary for students to perform well on an assessment. They are not “optional.”

Assessed events may include exams, quizzes, essays, presentations, class discussions, and projects where a student’s individual and independent skill and understanding can be observed and evaluated. Assessed events “count” in the grade book and must be performed so that the teacher can verify evidence of the student’s unaided ability.

SCHOOL COUNSELORS

Counselors are available to support students in a variety of ways such as: academic, personal, social and college and career pathways. School Counselors can be available throughout the school day and are also available by appointment to meet with students and parents. Students can access their school counselor during class time with teacher permission or by completing a conference request form with the counseling department secretary.

RUNNING START & CASCADIA TECH

Due to the nature of our flexible schedule and focus on collaboration, the learning experiences at Discovery High School are not designed to support part-time students. Once they are juniors and seniors, students wishing to explore Running Start at Clark Community College or Cascadia Tech would best be served by attending Camas High School or other programs with a traditional, fixed schedule. Discovery does offer other dual-credit opportunities for students, such as a select number of AP courses and college in the high school through Central Washington University.

PROGRESS REPORTS

At the high school level there are no regularly scheduled grade conferences with parents. Report cards, with final grades, are mailed home each semester. Progress reports are available at six week intervals. We feel that communication and cooperation between the school and home is very important. Parents are urged to use the Skyward system to continually monitor their student’s progress and to contact teachers immediately with concerns. Student graduation status reports are given to students each year.

HIGH SCHOOL AND BEYOND PLANS

Assisted by their parents and an advisor, eighth grade students are asked to create a plan for their four years of high school and the two years after graduation. The student will follow this program of study each year until graduation, with yearly status summaries and adjustments made during forecasting. Seniors are required to complete a High School and Beyond Plan form before graduation.

REGISTRATION FOR CLASSES

Once a year, in the spring, students forecast/select classes for the following school year. Parent involvement with, and approval of, the student’s choice of classes is expected. **Throughout the registration process, students are informed to select their courses wisely as they will be held to**

the classes they registered for during Spring Forecasting. If a change is necessary, it should be made prior to the beginning of the school year. After that time, the student is committed to the class. Students are encouraged to remain in year long classes for both semesters. Exceptions to this will involve a conference with the current teacher, a parent signature, new teachers permission to join the class (pending availability of requested course) and the assigned administrator's approval. The change must be approved or a grade penalty may result.

Students may also make schedule changes during orientation for the reasons listed below. Any request for a schedule change must be submitted before the 4th day of the beginning of the semester by initiating and securing an appointment with the assigned school counselor. It is anticipated these changes would be very limited and only for significant extenuating circumstances. Again, only requests that include severe extenuating circumstances will be considered.

SCHEDULE CHANGE POLICY:

During the first four days of the semester, schedule changes may be made under the following circumstances: Day 1 through Day 4 considerations:

1. You are missing a class period in your schedule
2. You have more than one class schedule for the same period
3. You have not taken the prerequisite course
4. The yearlong class does not have the same teacher listed for both semesters
5. You took a class in credit recovery or summer school and no longer need the class
6. There is an improper course placement
7. You are part of band, choir, drama, leadership or another year long activity and it is not currently in your schedule

Day 5 through Day 10

No schedule changes w/o significant extenuating circumstances

Requires conference with teacher, parent approval, new teacher's approval, assigned administrator approval before a schedule change can be made.

A "W" for withdrawn will be entered on the transcript

Day 11 through remainder of semester

No schedule changes

The Camas School District does not discriminate on the basis of sex, race, creed, religion, color, national origin, age, honorably discharged veteran or military status, sexual orientation including gender expression or identity, the presence of any sensory, mental, or physical disability, or the use of a trained dog guide or service animal by a person with a disability in its programs and activities and provides equal access to the *Boy Scouts and other designated youth groups. The following employees have been designated to handle questions and complaints of alleged discrimination:

Title IX Coordinator/Compliance Coordinator for 28A.640 and 28A.642 RCW
and ADA Coordinator

Marilyn Boerke, Human Resource Director
841 NE 22nd Ave., Camas , WA 98607
360-335-3000
marilyn.boerke@camas.wednet.edu

Section 504

Dr. Charlene Williams, Assistant Superintendent
841 NE 22nd Ave., Camas, WA 98607
360-335-3000
charlene.williams@camas.wednet.edu

Please also see the following Board Policies and Procedures:

For Students:

3207: Prohibition of Harassment, Intimidation and Bullying
3210: Nondiscrimination

For Community:

4220: Complaints Concerning Staff or Programs
5010: Nondiscrimination and Affirmative Action

For Staff:

5270: Resolution of Staff Complaints
6590: Sexual Harassment
Applicable Collective Bargaining Agreements