



Course Catalog
2017-18
School Year

ENGLISH LANGUAGE ARTS

ENGLISH LANGUAGE ARTS 9 A and B

Credits 10

This freshman-year English course engages students in literary analysis and inferential evaluation of great texts both classic and contemporary. While critically reading fiction, poetry, drama, and literary nonfiction, students will master comprehension and literary-analysis strategies. Interwoven in the lessons across two semesters are activities that encourage students to strengthen their oral language skills and produce clear, coherent writing. Students will read a range of classic texts including Homer's *The Odyssey*, Shakespeare's *Romeo and Juliet*, and Richard Connell's "The Most Dangerous Game." They will also study short but complex texts, including influential speeches by Dr. Martin Luther King Jr., Franklin D. Roosevelt, and Ronald Reagan. Contemporary texts by Richard Preston, Julia Alvarez, and Maya Angelou round out the course.

ENGLISH LANGUAGE ARTS 10 A and B

Credits 10

Focused on application, this sophomore English course reinforces literary analysis and twenty-first century skills with superb pieces of literature and literary nonfiction, application e-resources, and educational interactives. Each thematic unit focuses on specific literary analysis skills and allows students to apply them to a range of genres and text structures. As these units meld modeling and application, they also expand on training in media literacy, twenty-first century career skills, and the essentials of grammar and vocabulary. Under the guidance of the eWriting software, students also compose descriptive, persuasive, expository, literary analysis, research, narrative, and compare-contrast essays.

ENGLISH LANGUAGE ARTS 11 A and B

Credits 10

This junior-year English course invites students to delve into American literature from early American Indian voices through contemporary works. Students engage in literary analysis and inferential evaluation of great texts as the centerpieces of this course. While critically reading fiction, poetry, drama, and expository nonfiction, students master comprehension and literary analysis strategies. Interwoven in the lessons across two semesters are tasks that encourage students to strengthen their oral language skills and produce creative, coherent writing. Students read a range of short but complex texts, including works by Ralph Waldo Emerson, Emily Dickinson, Herman Melville, Nathaniel Hawthorne, Paul Laurence Dunbar, Martin Luther King, Jr., F. Scott Fitzgerald, Sandra Cisneros, Amy Tan, and Dave Eggers.

ENGLISH LANGUAGE ARTS 12 A and B

Credits 10

This senior-level English course offers fascinating insight into British literary traditions spanning from Anglo-Saxon writing to the modern period. With interactive introductions and historical contexts, this full-year course connects philosophical, political, religious, ethical, and social influences of each time period to the works of many notable authors, including Chaucer, William Shakespeare, Queen Elizabeth I, Elizabeth Barrett Browning, and Virginia Woolf. Adding an extra dimension to the British literary experience, this course also exposes students to world literature, including works from India, Europe, China, and Spain.

MATHEMATICS

PRE-ALGEBRA A and B

Credits 10

This full-year course is designed for students who have completed a middle school mathematics sequence but are not yet algebra-ready. This course reviews key algebra readiness skills from the middle grades and introduces basic Algebra I work with appropriate support. Students revisit concepts in numbers and operations, expressions and equations, ratios and proportions, and basic functions. By the end of the course, students are ready to begin a more formal high school Algebra I study.

ALGEBRA I A and B

Credits 10

This full-year course focuses on five critical areas: relationships between quantities and reasoning with equations, linear and exponential relationships, descriptive statistics, expressions and equations, and quadratic functions and modeling. This course builds on the foundation set in middle grades by deepening students' understanding of linear and exponential functions and developing fluency in writing and solving one-variable equations and inequalities. Students will interpret, analyze, compare, and contrast functions that are represented numerically, tabularly, graphically, and algebraically. Quantitative reasoning is a common thread throughout the course as students use algebra to represent quantities and the relationships among those quantities in a variety of ways. Standards of mathematical practice and process are embedded throughout the course, as students make sense of problem situations, solve novel problems, reason abstractly, and think critically.

GEOMETRY A and B

Credits 10

This course formalizes what students learned about geometry in the middle grades with a focus on reasoning and making mathematical arguments. Mathematical reasoning is introduced with a study of triangle congruency, including exposure to formal proofs and geometric constructions. Then students extend what they have learned to other essential triangle concepts, including similarity, right-triangle trigonometry, and the laws of sines and cosines. Moving on to other shapes, students justify and derive various formulas for circumference, area, and volume, as well as cross-sections of solids and rotations of two-dimensional objects. Students then make important connections between geometry and algebra, including special triangles, slopes of parallel and perpendicular lines, and parabolas in the coordinate plane, before delving into an in-depth investigation of the geometry of circles. The course closes with a study of set theory and probability, as students apply theoretical and experimental probability to make decisions informed by data analysis.

ALGEBRA II A and B

Credits 10

This course focuses on functions, polynomials, periodic phenomena, and collecting and analyzing data. The course begins with a review of linear and quadratic functions to solidify a foundation for learning these new functions. Students make connections between verbal, numeric, algebraic, and graphical representations of functions and apply this knowledge as they create equations and inequalities that can be used to model and solve mathematical and real-world problems. As students refine and expand their algebraic skills, they will draw analogies among the operations and field properties of real numbers and those of complex numbers and algebraic expressions. Mathematical practices and habits of mind are embedded throughout the course, as students solve novel problems, reason abstractly, and think critically.

PRECALCULUS

Credits 5

With an emphasis on function families and their representations, Precalculus is a thoughtful introduction to advanced studies leading to calculus. The course briefly reviews linear equations, inequalities, and systems and moves purposefully into the study of functions. Students then discover the nature of graphs and deepen their understanding of polynomial, rational, exponential, and logarithmic functions. Scaffolding rigorous content with clear instruction, the course leads students through an advanced study of trigonometric functions, matrices, and vectors. The course concludes with a short study of probability and statistics.

CONSUMER MATH (Elective class)

Credits 5

Connecting practical mathematical concepts to personal and business settings, this course offers informative and highly useful lessons that challenge students to gain a deeper understanding of financial math. Relevant, project-based learning activities cover stimulating topics such as personal financial planning, budgeting and wise spending, banking, paying taxes, the importance of insurance, long-term investing, buying a house, consumer loans, economic principles, traveling abroad, starting a business, and analyzing business data. Offered as a two-semester course for high school students, this course encourages mastery of math skill sets, including percentages, proportions, data analysis, linear systems, and exponential functions.

TRIGONOMETRY

Credits 5

In this one-semester course, students use their geometry and algebra skills to begin their study of trigonometry. Students will be required to express understanding using qualitative, quantitative, algebraic, and graphing skills. This course begins with a quick overview of right-triangle relationships before introducing trigonometric functions and their applications. Students explore angles and radian measures, circular trigonometry, and the unit circle. Students extend their understanding to trigonometric graphs, including the effects of translations and the inverses of trigonometric functions. This leads to the laws of sines and cosines, followed by an in-depth exploration of trigonometric identities and applications. This course ends with an introduction to the polar coordinate system, complex numbers, and DeMoivre's theorem.

SCIENCE

EARTH SCIENCE A and B

Credits 10

Students enrolled in this dynamic course explore the scope of Earth sciences, covering everything from basic structure and rock formation to the incredible and volatile forces that have shaped and changed our planet. As climate change and energy conservation become increasingly prevalent in the national discourse, it will be important for students to understand the concepts and causes of our changing Earth. Earth Science is a two-semester course that provides a solid foundation for understanding the physical characteristics that make the planet Earth unique and examines how these characteristics differ among the planets of our solar system.

PHYSICAL SCIENCE A and B

Credits 10

This full-year course focuses on basic concepts in chemistry and physics and encourages exploration of new discoveries in the field of physical science. The course includes an overview of scientific principles and procedures and has students examine the chemical building blocks of our physical world and the composition of matter. Additionally, students explore the properties that affect motion, forces, and energy on Earth. Building on these concepts, the course covers the properties of electricity and magnetism and the effects of these phenomena. As students refine and expand their understanding of physical science, they will apply their knowledge to complete interactive virtual labs that require them to ask questions and create hypotheses. Hands-on wet lab options are also available.

ENVIRONMENTAL SCIENCE A and B

Credits 10

Environmental science is a captivating and rapidly expanding field, and this two-semester course offers compelling lessons that cover many aspects of the field: ecology, the biosphere, land, forests and soil, water, energy and resources, and societies and policy. Through unique activities and material, high school students connect scientific theory and concepts to current, real-world dilemmas, providing them with opportunities for mastery in each of the segments throughout the semester.

BIOLOGY A and B

Credits 10

This compelling two-semester course engages students in the study of life and living organisms and examines biology and biochemistry in the real world. This is a yearlong course that encompasses traditional concepts in biology and encourages exploration of new discoveries in this field of science. The components include biochemistry, cell biology, cell processes, heredity and reproduction, the evolution of life, taxonomy, human body systems, and ecology. This course includes both hands-on wet labs and virtual lab options. **On site wet labs mandatory.**

CHEMISTRY A and B

Credits 10

This rigorous, full-year course engages students in the study of the composition, properties, changes, and interactions of matter. The course covers the basic concepts of chemistry and includes eighteen virtual laboratory experiments that encourage higher-order thinking applications, with wet lab options if preferred. The components of this course include chemistry and its methods, the composition and properties of matter, changes and interactions of matter, factors affecting the interactions of matter, electrochemistry, organic chemistry, biochemistry, nuclear chemistry, mathematical applications, and applications of chemistry in the real world. **On site wet labs mandatory.**

SOCIAL STUDIES

WORLD HISTORY A and B

Credits 10

This yearlong course examines the major events and turning points of world history from the Enlightenment to the present. Students investigate the foundational ideas that shaped the modern world in the Middle East, Africa, Europe, Asia, and the Americas, and then explore the economic, political, and social revolutions that have transformed human history. This rigorous study of modern history examines recurring themes, such as social history, democratic government, and the relationship between history and the arts, allowing students to draw connections between the past and the present, across cultures, and among multiple perspectives. Students use a variety of primary and secondary sources, including legal documents, essays, historical writings, and political cartoons to evaluate the reliability of historical evidence and to draw conclusions about historical events. Students also sharpen their writing skills in shorter tasks and assignments, and practice outlining and drafting skills by writing full informative and argumentative essays.

U.S. HISTORY A and B

Credits 10

U.S. History I is a yearlong course that dynamically explores the people, places, and events that shaped early United States history. This course stretches from the Era of Exploration through the Industrial Revolution, leading students through a careful examination of the defining moments that shaped the nation of today. Students begin by exploring the colonization of the New World and examining the foundations of colonial society. As they study the early history of the United States, students will learn critical-thinking skills by examining the constitutional foundations of U.S. government. Recurring themes such as territorial expansion, the rise of industrialization, and the significance of slavery will be examined in the context of how these issues contributed to the Civil War and Reconstruction.

U.S. GOVERNMENT

Credits 5

This semester-long course provides students with a practical understanding of the principles and procedures of government. The course begins by establishing the origins and founding principles of American government. After a rigorous review of the Constitution and its amendments, students investigate the development and extension of civil rights and liberties. Lessons also introduce influential Supreme Court decisions to demonstrate the impact and importance of constitutional rights. The course builds on this foundation by guiding students through the function of government today and the role of citizens in the civic process and culminates in an examination of public policy and the roles of citizens and organizations in promoting policy changes. Throughout the course, students examine primary and secondary sources, including political cartoons, essays, and judicial opinions. Students also sharpen their writing skills in shorter tasks and assignments and practice outlining and drafting skills by writing full informative and argumentative essays.

ECONOMICS

Credits 5

This course invites students to broaden their understanding of how economic concepts apply to their everyday lives—including microeconomic and macroeconomic theory and the characteristics of mixed-market economies, the role of government in a free-enterprise system and the global economy, and personal finance strategies. Throughout the course, students apply critical-thinking skills while making practical economic choices. Students also master literacy skills through rigorous reading and writing activities. Students analyze data displays and write routinely and responsively in tasks and assignments that are based on scenarios, texts, activities, and examples. In more extensive, process-based writing lessons, students write full-length essays in informative and argumentative formats.

ELECTIVES

INTRODUCTION TO ART

Credits 5

Covering art appreciation and the beginning of art history, this course encourages students to gain an understanding and appreciation of art in their everyday lives. Presented in an engaging format, this one-semester course provides an overview of many introductory themes: the definition of art, the cultural purpose of art, visual elements of art, terminology and principles of design, and two- and three-dimensional media and techniques. Tracing the history of art, high school students enrolled in the course also explore the following time periods and places: prehistoric art, art in ancient civilizations, and world art before 1400.

ART HISTORY I

Credits 5

Introducing art within historical, social, geographical, political, and religious contexts for understanding art and architecture through the ages, this course offers high school students an in-depth overview of art throughout history, with lessons organized by chronological and historical order and world regions. Students enrolled in this one-semester course cover topics including early medieval and Romanesque art; art in the twelfth, thirteenth, and fourteenth centuries; fifteenth-century art in Europe; sixteenth-century art in Italy; the master artists; High Renaissance and baroque art; world art, which includes the art of Asia, Africa, the Americas, and the Pacific cultures; eighteenth- and nineteenth-century art in Europe and the Americas; and modern art in Europe and the Americas.

PSYCHOLOGY A and B

Credits 10

This two-semester course introduces high school students to the study of psychology and helps them master fundamental concepts in research, theory, and human behavior. Students analyze human growth, learning, personality, and behavior from the perspective of major theories within psychology, including the biological, psychosocial, and cognitive perspectives. From a psychological point of view, students investigate the nature of being human as they build a comprehensive understanding of traditional psychological concepts and contemporary perspectives in the field. Course components include an introduction to the history, perspectives, and research of psychology; an understanding of topics such as the biological aspects of psychology, learning, and cognitive development; the stages of human development; aspects of personality and intelligence; the classification and treatment of psychological disorders; and psychological aspects of social interactions.

SOCIOLOGY

Credits 5

Providing insight into the human dynamics of our diverse society, this is an engaging, one-semester course that delves into the fundamental concepts of sociology. This interactive course, designed for high school students, covers cultural diversity and conformity, basic structures of society, individuals and socialization, stages of human development as they relate to sociology, deviance from social norms, social stratification, racial and ethnic interactions, gender roles, family structure, the economic and political aspects of sociology, the sociology of public institutions, and collective human behavior, both historically and in modern times.

STRATEGIES FOR ACADEMIC SUCCESS

Credits 5

Offering a comprehensive analysis of different types of motivation, study habits, and learning styles, this one-semester course encourages high school and middle school students to take control of their learning by exploring varying strategies for success. Providing engaging lessons that will help students identify what works best for them individually, this one-semester course covers important study skills, such as strategies for taking high-quality notes, memorization techniques, test-taking strategies, benefits of visual aids, and reading techniques.

SPANISH I A and B

Credits 10

Students begin their introduction to high school Spanish with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Each unit consists of an ongoing adventure story, a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and multimedia cultural presentations covering major Spanish-speaking areas in Europe and the Americas.

SPANISH II A and B

Credits 10

High school students continue their introduction to Spanish with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Each unit consists of an ongoing adventure story, a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, cultural presentations covering major Spanish-speaking areas in Europe and the Americas, and assessments.

SPANISH III A and B

Credits 10

In this expanding engagement with Spanish, high school students deepen their focus on four key skills in foreign language acquisition: listening comprehension, speaking, reading, and writing. In addition, students read significant works of literature in Spanish and respond orally or in writing to these works. Continuing the pattern and building on what students encountered in the first two years, each unit consists of a new vocabulary theme and grammar concept, numerous

CAREER EXPLORATIONS

Credits 5

This course prepares students to make informed decisions about their future academic and occupational goals. Through direct instruction, interactive skill demonstrations, and practice assignments, students learn how to assess their own skills and interests, explore industry clusters and pathways, and develop plans for career and academic development. This course is designed to provide flexibility for students; any number of units can be selected to comprise a course that meets the specific needs of students.

CAREER PLANNING & DEVELOPMENT

Credits 5

Introducing high school students to the working world, this course provides the knowledge and insight necessary to compete in today's challenging job market. This relevant and timely course helps students investigate careers as they apply to personal interests and abilities, develop the skills and job search documents needed to enter the workforce, explore the rights of workers and traits of effective employees, and address the importance of professionalism and responsibility as careers change and evolve.

INTRODUCTION TO ENTREPRENEURSHIP I and II

Credits 10

This one-semester course teaches the key skills and concepts students need to know to plan and launch a business. Students learn about real-life teen entrepreneurs; characteristics of successful entrepreneurs; how to attract investors and manage expenses; sales stages, planning, and budgeting; how to generate business ideas and create a business plan; and how to promote and market a company. Topics include exploring factors of business success and failure, economic systems, competition, production, costs and pricing, accounting, bookkeeping and financial reporting, working with others, and successfully managing employees.

HEALTH SCIENCE CONCEPTS I and II

Credits 10

This yearlong course introduces high school students to the fundamental concepts of anatomy and physiology—including the organization of the body, cellular functions, and the chemistry of life. As they progress through each unit, students learn about the major body systems, common diseases and disorders, and the career specialties associated with each system. Students investigate basic medical terminology as well as human reproduction and development. Students are introduced to these fundamental health science concepts through direct instruction, interactive tasks, and practice assignments. This course is intended to provide students with a strong base of core knowledge and skills that can be used in a variety of health science career pathways.

INTRODUCTION TO BUSINESS I and II

Credits 10

In this two-semester introductory course, students learn the principles of business using real-world examples—learning what it takes to plan and launch a product or service in today's fast-paced business environment. This course covers an introduction to economics, costs and profit, and different business types. Students are introduced to techniques for managing money, personally and as a business, and taxes and credit; the basics of financing a business; how a business relates to society both locally and globally; how to identify a business opportunity; and techniques for planning, executing, and marketing a business to respond to that opportunity.

INTRODUCTION TO HEALTH SCIENCE

Credits 5

This high school course introduces students to a variety of healthcare careers, as they develop the basic skills required in all health and medical sciences. In addition to learning the key elements of the U.S. healthcare system, students learn terminology, anatomy and physiology, pathologies, diagnostic and clinical procedures, therapeutic interventions, and the fundamentals of medical emergency care. Throughout the course, instructional activities emphasize safety, professionalism, accountability, and efficiency for workers within the health care field.

COMPUTER APPLICATIONS: A and B**Credits 10**

This full-year course introduces students to the features and functionality of the most widely used productivity software in the world: Microsoft® Office®. Through video instruction, interactive skill demonstrations, and numerous hands-on practice assignments, students learn to develop, edit and share Office 2010 documents for both personal and professional use. By the end of this course, students will have developed basic proficiency in the most common tools and features of the Microsoft Office 2010 suite of applications: Word®, Excel®, PowerPoint®, and Outlook®.

HEALTH**Credits 5**

This comprehensive health course provides students with essential knowledge and decision-making skills for a healthy lifestyle. Students analyze aspects of emotional, social, and physical health and how these realms of health influence each other. Students apply principles of health and wellness to their own lives. In addition, they study behavior change and set health goals to work on throughout the semester. Additional topics of study include healthy relationships, reproductive health, disease transmission, substance abuse, safety and injury prevention, environmental health, and consumer health.

Introduction to Informational Technology A and B**Credits 10**

This course introduces students to the essential technical and professional skills required in the field of Information Technology (IT). Through hands-on projects and written assignments, students gain an understanding of the operation of computers, computer networks, Internet fundamentals, programming, and computer support. Students also learn about the social impact of technological change and the ethical issues related to technology. Throughout the course, instructional activities emphasize safety, professionalism, accountability, and efficiency for workers within the field of IT.