Virtual
Learning Academy

Virginia
Multidivision Online Provider
Course Catalog

Accredited by

English Language Arts

Grade 9 English

Course Description: This asynchronous Grade 9 English course is designed to enhance students' reading, writing, and critical thinking skills through a structured exploration of both literary and informational texts. The course is divided into 36 units, each focused on specific skills ranging from literary analysis to argumentative writing. Students will engage with a variety of texts, including poetry, nonfiction articles, and media, developing a deeper understanding of language and its effective use in different contexts.

Course Objectives:

- Develop the ability to analyze and interpret literary and informational texts.
- Enhance vocabulary through context and explicit instruction.
- Understand and apply the concepts of theme, symbolism, metaphor, and other literary devices.
- Improve writing skills across several formats including paragraphs, essays, and narratives.
- Cultivate critical thinking and reasoning abilities through structured argumentation and evidence evaluation.

Units and Topics:

1. **Compare and Contrast Literary and Informational Nonfiction**
    - Analyze similarities and differences in content, style, and purpose.
2. **Finding the Meaning of Unknown Words: Simone Biles**
    - Use context clues and other strategies to determine the meaning of new vocabulary.
3. **Author's Purpose: Why Good Advertising Works**
    - Identify and analyze the author's intent behind various advertising techniques.
4. **Finding the Best Evidence: Two Famous Friends**

- Evaluate and select credible evidence to support text analysis.

5. **Analyzing Information: What's Wrong With Our Food System**
    - Critically analyze informational content regarding food industry practices.
6. **Identifying Theme and Summarizing: Lucky Feet**
    - Determine the central theme and summarize key points.
7. **Cause and Effect: Getting Started on Saving the Everglades**
    - Understand and explain the cause-effect relationships in environmental conservation efforts.
8. **Core Concepts of Media Literacy**
    - Explore the principles of media literacy to critically engage with various media forms.
9. **Make Strategic Use of Multimodal Tools**
    - Integrate various digital tools to enhance learning and presentation of information.
10. **Writing: Paragraph**
    - Master the structure and development of a coherent paragraph.
11. **Writing: Brainstorming**
    - Employ techniques for generating and organizing ideas effectively.
12. **Writing: Topic Sentences**
    - Learn to craft clear and compelling topic sentences.
13. **Writing: Supporting and Concluding Sentences**
    - Develop skills in writing supportive sentences and effective conclusions.
14. **Writing: Definition Paragraph**
    - Focus on defining terms and concepts clearly and concisely.
15. **Writing: Process Paragraph**

- Describe a sequence of actions or steps in a detailed manner.

16. **Writing: Opinion Paragraph**
    - Express opinions supported by reasons and evidence.
17. **Writing: Narrative Paragraph**
    - Create engaging narrative paragraphs using storytelling techniques.
18. **Writing: Paragraphs to Essays**
    - Transition from writing paragraphs to full essays.
19. **Parts to an Argumentative Essay**
    - Understand the components that make up a solid argumentative essay.
20. **Argumentative: Note-Taking**
    - Develop effective note-taking strategies to organize and retain information.
21. **Argumentative: Types of Evidence**
    - Distinguish between different types of evidence and their uses in arguments.
22. **Argumentative: Introduction**
    - Craft compelling introductory paragraphs for argumentative essays.
23. **Argumentative: Body Paragraphs**
    - Structure body paragraphs that effectively support the thesis with evidence.
24. **Argumentative: Counterargument**
    - Recognize, construct, and refute counterarguments.
25. **Argumentative: Conclusion**
    - Write strong conclusions that reinforce the argument and provide closure.
26. **Argumentative: Draft & In-Text Citations**

- Develop drafts and correctly use in-text citations to credit sources.

27. **Argumentative Essay: Final Draft**
    - Refine essays to produce polished final drafts.
28. **Literary Forms**
    - Explore different forms of literature to understand genre-specific features.
29. **"Mother to Son" by Langston Hughes**
    - Analyze metaphor, diction, imagery, and theme in Hughes' poetry.
30. **"Sonnet 130" by William Shakespeare**
    - Examine Shakespeare's use of simile and irony.
31. **"A Dream within a Dream" by Edgar Allan Poe**
    - Discuss symbolism and tone in Poe's poetry.
32. **“The Rose That Grew from Concrete” by Tupac Shakur**
    - Interpret symbolism and personification in Shakur's work.
33. **"O Captain! My Captain!" by Walt Whitman**
    - Analyze metaphor and juxtaposition in Whitman's poem.
34. **"No Man is an Island" by John Donne**
    - Explore extended metaphor, point of view, and paradox in Donne’s poetry.
35. **"Women" by Alice Walker**
    - Discuss imagery and metaphor in Walker's poetry.
36. **Poetry Assessment: Identifying Elements of Poetry**
    - Assess understanding of poetic elements through a formal assessment.

Assessment and Grading: Students will be assessed through quizzes, written assignments, and a final project for each unit. Grades will be based on timely completion and quality of work submitted.

Grade 10 English

Course Description: This Grade 10 English asynchronous course is structured to deepen students' analytical and creative skills through focused studies in writing, literature, and informational texts. The course offers a comprehensive exploration of various literary genres including fiction, drama, poetry, and nonfiction, alongside intensive writing workshops designed to refine students' skills in argumentative and literary analysis essays. This self-paced format allows students to engage with materials and assignments at their own pace, fostering independent learning and critical thinking.

Course Objectives:

- Enhance proficiency in academic writing and literary analysis.
- Broaden understanding of various literary genres and their unique elements.
- Develop skills in critical reading and interpretation of texts across genres.
- Strengthen the ability to construct well-founded arguments and effectively use evidence.
- Improve mastery of formal language, transitions, and textual analysis.

Units and Topics:

1. **Writing: The Basics - The Writing Process**
    - Understand and apply the stages of the writing process from planning to final draft.
2. **Writing: The Basics - Formal Language and Transitions**
    - Develop skills in using formal language and transitions to improve flow and clarity of writing.
3. **Writing: The Basics – Textual Evidence and I.C.E.**
    - Learn to Introduce, Cite, and Explain (I.C.E.) textual evidence in writing.
4. **Mastering Teamwork Dynamics in Diverse Settings**
    - Explore effective teamwork strategies within diverse group dynamics.

5. **Literary Elements and Techniques**
    - Study key literary elements and techniques used in various forms of literature.
6. **Reading Literature: Narrative Fiction**
    - Analyze themes, characters, and plot developments in narrative fiction.
7. **Reading Literature: Myth**
    - Explore myths from various cultures, focusing on their structure and underlying messages.
8. **Reading Literature: Fables**
    - Analyze moral lessons and character archetypes in fables from around the world.
9. **Reading Literature: Poetry**
    - Interpret themes and forms in a range of poetic works.
10. **Reading Literature: Drama**
    - Study dramatic texts, understanding elements such as dialogue, setting, and stage direction.
11. **Reading Literature: Paired Texts**
    - Compare and contrast themes and styles in paired literary texts.
12. **Writing: What is a Literary Analysis Essay?**
    - Introduce the structure and purpose of a literary analysis essay.
13. **Writing: Literary Analysis Essay Note Taking & Thesis Development**
    - Develop techniques for effective note-taking and thesis statement formulation.
14. **Writing: Literary Analysis Essay The Introduction**
    - Craft engaging and informative introductory paragraphs for literary analysis essays.

15. **Writing: Literary Analysis Essay The Body**
    - Structure body paragraphs that effectively support and develop the thesis.
16. **Writing: Literary Analysis Essay The Conclusion**
    - Write strong conclusions that summarize and close the analysis.
17. **Writing: Literary Analysis Essay Drafting**
    - Compile notes and insights into a coherent draft.
18. **Writing: Literary Analysis Essay Revise & Edit**
    - Revise drafts for coherence, clarity, and correctness and apply final edits.
19. **Compare and Contrast Literary and Informational Nonfiction**
    - Analyze differences and similarities between literary and informational texts.
20. **Data Visualization in Nonfiction Text**
    - Understand and interpret data visualizations within nonfiction contexts.
21. **Reading Informational Texts: Articles**
    - Analyze informational articles, focusing on argument structure and content.
22. **Reading Informational Texts: Paired Texts**
    - Evaluate paired informational texts to compare perspectives and data.
23. **Reading Informational Texts: Arguments**
    - Dissect the construction of arguments and the use of evidence in informational texts.
24. **Writing: Review**
    - Reinforce writing skills developed throughout the course.
25. **Writing: What is an Argumentative Essay?**

- Define the argumentative essay and its components.

26. **Writing: Argumentative Essay Note Taking & Thesis Development**
    - Techniques for organizing research and developing a thesis for argumentation.
27. **Writing: Argumentative Essay Introduction**
    - Learn to introduce argumentative essays in a compelling manner.
28. **Writing: Argumentative Essay Body Paragraph Basics**
    - Construct effective body paragraphs with clear reasoning and supportive evidence.
29. **Writing: Argumentative Essay The Opposing Claim**
    - Address and refute opposing viewpoints in argumentative essays.
30. **Writing: Argumentative Essay Conclusion**
    - Conclude argumentative essays by reinforcing the argument and providing closure.
31. **Writing: Argumentative Essay Drafting**
    - Draft the argumentative essay using accumulated research and outlined structure.
32. **Writing: Argumentative Essay Revise & Edit**
    - Revise and edit the essay to enhance precision and readability.
33. **British Literature**
    - Dive into the rich history and diversity of British literature, studying key authors and texts.
34. **Decoding Media**
    - Develop critical media literacy skills to analyze and interpret media messages.
35. **Characters in Context**

- Examine how characters are shaped by and reflect their cultural, social, and historical contexts.

36. **Essay Mastery: Blending, Comparing, and Analyzing**

- Master advanced essay writing techniques that blend analysis, comparison, and synthesis.

Assessment and Grading: Students will be evaluated through regular quizzes, written assignments, and comprehensive projects that reflect their understanding of each unit. Grades will be based on completeness, accuracy, depth of analysis, and adherence to writing conventions.

Grade 11 English

Course Description: This Grade 11 English course is designed for asynchronous learning, providing students with a comprehensive study of English language and literature. The course emphasizes the development of linguistic skills such as vocabulary building, understanding word origins, and mastering complex grammar. Additionally, it delves into literary analysis, covering significant genres and texts, and enhancing writing skills through various types of essays and technical writing. The course structure supports self-paced study while ensuring rigorous academic engagement.

Course Objectives:

- Enhance understanding of English vocabulary, including word origins and changes in word usage.
- Develop skills in literary analysis focusing on elements like theme, plot, and character.
- Strengthen writing abilities across different formats, including essays, technical writing, and persuasive texts.
- Cultivate critical thinking and analytical skills through the examination of primary sources and complex texts.

Units and Topics:

1. **Word Meanings**
    - Explore and expand vocabulary through contextual learning.
2. **Word Origin**
    - Study the etymology of English words to enhance understanding of language evolution.
3. **Word Changes - Parts of Speech**
    - Analyze how words can change roles across different contexts and structures.
4. **Hyphenation and Spelling**

- Master the rules of hyphenation and complex spelling conventions.

5. **Sentence Boundaries**
    - Define and practice correct sentence structuring to avoid run-ons and fragments.
6. **Figures of Speech - Hyperbole and Paradox**
    - Explore the use and effects of hyperbole and paradox in written text.
7. **Central Ideas**
    - Identify and analyze the central ideas within various texts.
8. **Themes**
    - Understand and interpret major themes in literature.
9. **Textual Evidence**
    - Develop skills in identifying and utilizing textual evidence in literary analysis.
10. **Plot**
    - Analyze the structure and elements of plots in narrative literature.
11. **Ideas and Events**
    - Understand how ideas and events are presented and developed in texts.
12. **Text Features and Directions**
    - Examine how different text features guide the reading and understanding of texts.
13. **Types of Writing**
    - Explore different forms of writing including expository, narrative, and descriptive.
14. **Thesis and Claim**
    - Learn to develop clear theses and claims for academic writing.

15. **Ethical Information Use**
    - Understand the importance of ethical research and the proper use of information.
16. **Your Writing**
    - Focus on personal writing improvement through iterative practice and feedback.
17. **Influence of the Mass Media**
    - Study how media influences public opinion and individual beliefs.
18. **Semester Exam**
    - Comprehensive examination covering all topics learned in the first semester.
19. **Fiction: "The Tell-Tale Heart"**
    - Analyze Edgar Allan Poe’s techniques in creating suspense and psychological drama.
20. **Nonfiction: "The Narrative of the Life of Frederick Douglass"**
    - Study narrative techniques and themes in historical and autobiographical contexts.
21. **Persuasive Text: Girls of the Crescent**
    - Examine persuasive techniques and the effectiveness of argumentative strategies.
22. **Exploring Advance Grammar and Style**
    - Deepen understanding of complex grammatical structures and stylistic choices in writing.
23. **Fact and Opinion: Parents, Teens, and Texting**
    - Differentiate between factual statements and opinions in contemporary texts.
24. **Exploring a Primary Source**

- Learn methods for analyzing and interpreting primary historical documents.

25. **Primary Source - Preamble to the Constitution**
    - Analyze foundational governmental documents to understand their historical and contemporary significance.
26. **Primary Source - The New Colossus**
    - Study the poem by Emma Lazarus as a reflection of American values and history.
27. **Primary Source - Roosevelt's Declaration of War Address**
    - Examine rhetorical strategies and historical context of key wartime speeches.
28. **Primary Source: Address to the Nation on Terrorist Attacks**
    - Analyze speeches for rhetorical effectiveness and historical impact.
29. **Courage**
    - Explore the theme of courage across various literary forms and historical contexts.
30. **Being Different**
    - Study literary representations of diversity, identity, and societal acceptance.
31. **Failure and Success**
    - Analyze how different texts portray the themes of failure and success.
32. **Rhetorical Techniques**
    - Master the use of rhetorical devices in writing and speech.
33. **Rhetoric and Writing**
    - Apply rhetorical techniques to improve personal writing and persuasive abilities.
34. **Job Application and Technical Writing**

- Develop practical writing skills for the professional world.

35. **Essay Mastery: Blending, Comparing, and Analyzing**
    - Enhance essay writing skills by blending analysis, comparison, and synthesis.
36. **Final Exam**
    - Comprehensive examination covering all topics studied throughout the year.

Assessment and Grading: Students will be evaluated based on a combination of assignments, projects, quizzes, and two comprehensive exams (mid-term and final). Each unit will include specific assignments designed to test the students' understanding and application of the topics discussed. These may include:

- **Written Assignments**: Essays, response papers, and short analyses that encourage critical thinking and mastery of literary and non-literary texts.
- **Quizzes**: Regular quizzes to assess comprehension of the key concepts and vocabulary from each unit.
- **Projects**: In-depth projects that may involve research, creative writing, or multimedia presentations, particularly in units dealing with media influence and rhetorical techniques.
- **Exams**: The mid-term and final exams will test a comprehensive range of skills acquired throughout the course, focusing on students' abilities to analyze, synthesize, and evaluate texts and concepts.

Grade 12 English

Course Description: This asynchronous English course for Grade 12 focuses on a deep exploration of British literature and advanced research and writing skills. Students will study classic and contemporary literary texts, including poetry, drama, and prose, to develop their analytical and interpretative abilities. Additionally, the course integrates a comprehensive research component, where students will learn to effectively gather, analyze, present, and discuss information in various formats, preparing them for college-level writing and beyond.

Course Objectives:

- Gain a thorough understanding of British literature, exploring major authors and their works.
- Develop critical thinking and analytical skills through literary analysis.
- Enhance research skills, focusing on the ethical use of information and technology.
- Improve writing skills across different formats, particularly in academic and professional contexts.

Units and Topics:

1. **British Literature**
    - Overview of key periods and authors in British literature.
2. **Excerpts from Romeo and Juliet**
    - Study character development, themes, and Shakespeare's language.
3. **Sonnet 43**
    - Analyze poetic structure, themes, and language used in the sonnet.
4. **A Matter of Prejudice**
    - Explore themes of social justice and character portrayal in the narrative.
5. **I Am Offering This Poem**

- Interpret themes of love and sacrifice within the poem.

6. **The Selfish Giant**
    - Discuss the moral lessons and character transformation in the story.
7. **The Walrus and the Carpenter**
    - Analyze the use of narrative and moral perspective in the poem.
8. **My Last Duchess**
    - Study narrative voice and themes of power and control in the dramatic monologue.
9. **Love and Friendship**
    - Compare the portrayal of love and friendship in literature.
10. **The Market Square Dog**
    - Analyze character and thematic development in the story.
11. **The Landlady**
    - Explore suspense and narrative technique in the short story.
12. **The Land of Story-Books**
    - Study the depiction of imagination and adventure in the poem.
13. **Travel**
    - Examine representations of travel in literature and what they signify.
14. **Idioms and Allusions**
    - Understand and analyze the use of idioms and allusions in English literature.
15. **Digital Storytelling**
    - Explore how modern technology can be used to tell stories effectively.
16. **Analyzing Conflicting Reports**
    - Develop skills to critically evaluate differing viewpoints in media.

17. **How to Write a Job-Seeking Email**
    - Learn professional communication skills for job applications.
18. **British Literature Assessment**
    - Comprehensive test covering the British literature studied.

19-36. **Research and Information Analysis Module:** This module includes multiple units focused on developing advanced research skills, from understanding types of information to effectively presenting and communicating research findings. Specific units cover topics like branding in the context of modern consumer culture, ethical information usage, the analysis of visual media, and the completion of a significant research paper. These units are designed to enhance students' abilities to conduct independent research, use technology for presentations, and understand the intricacies of both primary and secondary sources.

Assessment and Grading: Students will be assessed through a variety of methods:

- **Written Assignments**: Essays, analyses, and reflections on literature and research topics.
- **Quizzes and Exams**: Regular quizzes on literature and vocabulary, and comprehensive exams on major topics.
- **Projects**: Digital storytelling project, and a major research paper involving several drafts and a final presentation.
- **Participation**: Engagement in discussion boards and peer reviews.

Course Expectations: Students are expected to manage their time effectively to meet deadlines and participate actively in the course, maintaining academic integrity in all submissions.

Science

Earth Science

Course Description: This comprehensive Earth Science course is designed for Grade 9 students and offers a rigorous exploration of Earth's systems, geological processes, and the broader universe. Delivered asynchronously, the course enables students to study at their own pace while engaging deeply with topics ranging from the basics of Earth Science to more complex concepts like plate tectonics, natural resources, and the dynamics of the universe. The curriculum includes interactive modules, virtual lab activities, and a variety of multimedia content to enhance understanding and engagement.

Course Objectives:

- Develop an understanding of key Earth Science concepts and the scientific methods applied in earth sciences.
- Explore geological processes and the characteristics of minerals and rocks.
- Understand the dynamics of Earth’s water systems and atmospheric phenomena.
- Analyze the impact of human activities on natural resources and the environment.
- Gain knowledge about the universe, including star formation and planetary systems.

Units and Topics:

1. **Introduction to Earth Science**
    - Overview of Earth Science, including its branches and applications.
2. **Engineering Design Process in Earth Science**
    - Application of engineering principles to solve geological problems.
3. **Scientific Investigations**
    - Methods and tools for conducting scientific research in Earth Science.
4. **Mapping the Earth**

- Techniques and significance of geological and topographical mapping.

5. **Introduction to Minerals**
    - Basic concepts and types of minerals found in the Earth's crust.
6. **Properties of Minerals**
    - Physical and chemical properties that characterize different minerals.
7. **The Rock Cycle**
    - Detailed study of the rock cycle and the transformation of rock types.
8. **Igneous Rocks**
    - Formation, composition, and classification of igneous rocks.
9. **Sedimentary Rocks**
    - Processes of sedimentation, types, and significance of sedimentary rocks.
10. **Metamorphic Rocks**
    - Mechanisms of metamorphism and examples of metamorphic rocks.
11. **The Balance and Impact of Natural Resources**
    - Exploration of natural resources and their sustainable management.
12. **Natural Resources of Virginia**
    - Study specific natural resources found in Virginia and their uses.
13. **Understanding Plate Tectonics**
    - Basics of plate movements and their geological impacts.
14. **The Theory of Plate Tectonics**
    - Comprehensive study of the mechanisms and evidence for plate tectonics.
15. **Mountains, Earthquakes, and Volcanoes**

- Relationship between tectonic activity and mountain building, seismic activity, and volcanism.

16. **Soil**
    - Composition, formation, and types of soil.
17. **Weathering, Erosion, and Deposition**
    - Processes that shape the Earth’s surface.
18. **Earth Science Test 1**
    - First semester comprehensive assessment.
19. **Understanding Earth's Water System**
    - Study of hydrological processes including the water cycle and freshwater resources.
20. **Protecting Earth's Natural Resources**
    - Strategies for conservation and sustainable use of Earth’s resources.
21. **Fossil Formation**
    - Conditions and processes leading to fossilization.
22. **The Geologic Time Scale**
    - Understanding the divisions of Earth’s history.
23. **Virginia Geology and Chesapeake Bay**
    - Specific geological features and environmental concerns of Virginia and its waterways.
24. **Ocean Dynamics**
    - Oceanic processes and their environmental impacts.
25. **Tides of the Earth**
    - Mechanisms and effects of tidal movements.
26. **Air Masses and Weather**

- Formation of air masses and their impact on weather patterns.

27. **Climate**
    - Factors influencing climate and climate variability.
28. **Natural Hazards**
    - Study of natural disasters, their causes, and mitigation strategies.
29. **The Universe**
    - Overview of the universe, its structure, and major components.
30. **The Big Bang Theory**
    - Explanation of the theory and evidence supporting the origin of the universe.
31. **Motion in Space**
    - Laws of motion as they apply to celestial bodies.
32. **Inner and Outer Planets**
    - Characteristics and exploration of the solar system's planets.
33. **The Interactions and Orientations: Sun, Earth, and Moon**
    - Study of the gravitational and orbital relationships between the Sun, Earth, and Moon.
34. **The Earth and the Sun**
    - Impact of the Sun on Earth's climate and environments.
35. **Star Formation and Stellar Evolution**
    - Processes involved in the birth and life cycle of stars.
36. **Earth Science - Test 2**
    - Final comprehensive assessment covering all topics discussed.

Assessment and Grading: Students will be assessed through a combination of quizzes, written assignments, project-based tasks, and two comprehensive tests.

Assignments are designed to apply theoretical knowledge practically, fostering a deeper understanding of Earth Science concepts.

Additional Resources: Students will have access to online textbooks, scientific journals, interactive simulations, and video tutorials to aid their learning and understanding of complex concepts.

Biology

Course Description: This Biology course is designed for asynchronous learning, providing students with an in-depth exploration of biological concepts from the molecular to the ecosystem level. Through a structured series of units, students will engage with topics such as cellular biology, genetics, evolution, and ecology. The course combines theoretical foundations with practical inquiry-based learning, encouraging students to conduct experiments, utilize digital simulations, and participate in peer discussions virtually.

Course Objectives:

- Develop an understanding of fundamental biological concepts and scientific methodologies.
- Explore the structure and function of cells, biomolecules, and the genetic basis of life.
- Analyze the principles of heredity and the role of genetics in biological diversity.
- Understand the interrelationships within ecosystems and the principles of ecology.
- Apply biological knowledge to societal and technological issues.

Units and Topics:

1. **Understanding Scientific and Engineering Practices in Biology**
    - Introduction to scientific methods and engineering approaches in biological research.
2. **Planning and Conducting Scientific Investigations**
    - Techniques for designing and conducting experiments in biology.
3. **Water and Scientific Inquiry**
    - Exploration of water's properties and its importance in biological systems.
4. **Science, Society, and Technology**

- Discussion on how biological sciences interact with societal needs and technological advances.

5. **Biomolecules**
    - Study of the structure and function of biological macromolecules.
6. **Cells**
    - Examination of cell structure, function, and cellular processes.
7. **Cellular Growth, Division, and Specialization**
    - Mechanisms of cell growth, division (mitosis and meiosis), and cell differentiation.
8. **Virus, Bacteria, and Germ Theory**
    - Overview of microbiology and the historical development of germ theory.
9. **Photosynthesis and Chemosynthesis**
    - Chemical processes by which organisms produce energy.
10. **Cellular Respiration**
    - Exploration of the metabolic pathways of cellular respiration.
11. **Mitosis**
    - Detailed study of the process of mitosis in eukaryotic cells.
12. **Meiosis**
    - Examination of meiosis and its role in sexual reproduction.
13. **Chromosomal Disorders**
    - Analysis of common chromosomal abnormalities and their biological implications.
14. **DNA**
    - Structure and function of DNA.
15. **DNA Replication**

- Mechanism of DNA replication.

16. **RNA and Gene Expression**
    - Role of RNA in gene expression and protein synthesis.
17. **Gene Mutation**
    - Types, causes, and consequences of genetic mutations.
18. **First Semester Review**
    - Comprehensive review of all topics covered in the first semester.
19. **Gene Technologies**
    - Advanced technologies in genetic engineering and biotechnology.

20-25. **Heredity Units** - In-depth study of genetic inheritance patterns including monohybrid and dihybrid crosses, sex-linked traits, incomplete dominance, codominance, and multiple alleles.

26. **Pedigrees**
    - Techniques for analyzing and interpreting genetic pedigrees.
27. **Ecosystems**
    - Structure and function of different ecosystems.
28. **Energy in Ecosystems**
    - Flow of energy through food chains and food webs.
29. **Cycling of Matter**
    - Biogeochemical cycles and their importance in ecosystems.
30. **Populations and Communities**
    - Dynamics of populations and interactions within and between species in communities.
31. **Environment**
    - Human impact on the environment and conservation biology.

32. **Ecology Application Research**
    - Practical application of ecological concepts in contemporary research.
33. **Evolution**
    - Theories and evidence supporting biological evolution.
34. **Population Genetics**
    - Genetic variation and its role in population dynamics.
35. **Taxonomy**
    - Principles of classification and the diversity of life.
36. **Second Semester Review**
    - Final comprehensive review covering all topics discussed in the second semester.

Assessment and Grading: Assessment methods include quizzes, written assignments, lab reports, and two comprehensive exams. Students are expected to demonstrate their understanding through various formats, including interactive assessments and virtual presentations of their research findings.

Chemistry

Course Description: This Grade 11 Chemistry course is designed for asynchronous learning, enabling students to explore the fundamental concepts and applications of chemistry at their own pace. The course covers a broad spectrum of topics, from the basics of chemical matter to complex chemical reactions and theories. Students will engage with interactive digital resources, virtual lab experiments, and multimedia presentations to deepen their understanding of chemistry in daily life and advanced scientific contexts.

Course Objectives:

- Understand the basic principles and processes of chemistry including the structure of atoms, chemical bonding, and reactions.
- Develop skills in scientific inquiry and problem-solving using chemical calculations and laboratory techniques.
- Explore the historical development of key chemical theories to appreciate the evolution of the discipline.
- Apply chemical knowledge to environmental and technological issues facing society.

Units and Topics:

1. **What is Chemistry**
    - Introduction to chemistry as a science and its role in the natural world.
2. **How Do We Study Chemistry?**
    - Overview of methods and tools used in chemical research and education.
3. **Describing Matter**
    - Properties and classification of matter.
4. **Types of Matter**
    - Differentiation between elements, compounds, and mixtures.

5. **Phases of Matter**
    - Examination of solids, liquids, gases, and plasma.
6. **Changes in Matter**
    - Physical vs. chemical changes and the laws governing these processes.
7. **Historical Models of the Atom**
    - Development of atomic theory from Dalton to Rutherford.
8. **Planetary Model of the Atom**
    - Discussion of the Bohr model and its implications for understanding atomic structure.
9. **Quarterly Exam 1**
    - First quarter comprehensive assessment.
10. **Electronic Configurations**
    - How electrons are arranged in atoms and the significance of electron configurations.
11. **Periodic Table**
    - Organization and trends of the periodic table.
12. **Mole Concept**
    - Introduction to the mole and its use in chemical calculations.
13. **Ionic Bonding**
    - Formation and properties of ionic compounds.
14. **Covalent Bonding**
    - Exploration of covalent bonds and molecular compounds.
15. **Ionic Nomenclature**
    - Naming conventions for ionic compounds.
16. **Covalent Nomenclature**

- Naming conventions for covalent compounds.

17. **Nuclear Chemistry**
    - Study of radioactive decay, transmutation, and nuclear reactions.
18. **Quarterly Exam 2**
    - Second quarter comprehensive assessment.
19. **Intermolecular Forces**
    - Types and effects of intermolecular forces in substances.
20. **Classifying Chemical Reactions**
    - Types of chemical reactions and their characteristics.
21. **Balancing Chemical Equations**
    - Techniques for balancing chemical equations.
22. **Mathematical Interpretations of Chemical Reactions**
    - Stoichiometry and quantitative aspects of chemical formulas and reactions.
23. **Mathematical Analysis of Chemical Reactions**
    - Advanced stoichiometry including yield and efficiency calculations.
24. **Energy and Chemical Reactions**
    - Role of energy in chemical reactions, including exothermic and endothermic processes.
25. **Solutions**
    - Properties, preparation, and components of solutions.
26. **Solution Chemistry**
    - Concentration calculations and properties of solutions.
27. **Quarterly Exam 3**
    - Third quarter comprehensive assessment.

28. **Defining Acids and Bases**
    - Concepts of acids, bases, and their properties.
29. **pH Scale**
    - Understanding the pH scale and its applications.
30. **Acid-Base Chemistry**
    - Acid-base reactions, titration, and buffer solutions.
31. **Kinetic Molecular Theory**
    - Behavior of gases and the factors affecting gas properties.
32. **Empirical Gas Laws**
    - Relationships between temperature, pressure, volume, and quantity of gases.
33. **Ideal Gas Law**
    - Comprehensive gas law combining all gas variables.
34. **Kinetics**
    - Study of reaction rates and factors influencing the speed of chemical reactions.
35. **Molecular Geometry (Special Topic)**
    - Exploration of the shapes of molecules and their chemical and physical properties.
36. **Quarterly Exam 4**
    - Final comprehensive assessment.

Assessment and Grading: Students will be evaluated through quizzes, written assignments, lab reports, and quarterly exams. These assessments will focus on the application of chemical concepts, problem-solving skills, and practical understanding of chemical phenomena.

Additional Resources:

- **Digital Textbook and Reading Materials**: Access to all required readings and supplementary materials through an online platform.
- **Interactive Labs and Simulations**: Virtual lab simulations to provide hands-on experience in a virtual format.

Physics

Course Description: This asynchronous Physics course, designed for high school seniors, delves into the fundamental concepts of physics from classical mechanics to modern physics, including Newtonian mechanics, thermodynamics, and quantum physics. Students will explore these concepts through instructional materials, interactive simulations, and practical labs designed to reinforce theoretical knowledge with hands-on experience. The course is structured to foster self-paced learning while encouraging in-depth understanding through various assessments.

Course Objectives:

- Gain a foundational understanding of key physics concepts and principles.
- Develop skills in scientific inquiry and experimental design.
- Apply physics concepts to solve real-world problems and understand natural phenomena.
- Enhance critical thinking and problem-solving skills through quantitative and qualitative analysis.

Units and Topics:

1. **Introduction to Physics**
    - Overview of physics and its role in understanding the universe.
2. **Planning and Carrying Out an Investigation**
    - Basics of scientific methods and experimental design in physics.
3. **Motion In One Dimension**
    - Concepts of speed, velocity, and acceleration in straight-line motion.
4. **Describing Motion Lab Introduction**
    - Practical exploration of motion using lab activities.
5. **Projectile Motion**
    - Study of objects in motion in two dimensions under gravity.

6. **Learning and Simulating Projectile Motion**
    - Simulation activities to deepen understanding of projectile dynamics.
7. **Forces and Newton's Laws of Motion**
    - Introduction to the laws governing forces and motion.
8. **Exploring Newtons' Second Law Using a Simulation**
    - Application of Newton's Second Law through interactive simulations.
9. **Forces and Friction Lab**
    - Experimental study of different types of friction and their effects on motion.
10. **Circular Motion**
    - Dynamics of objects moving in circular paths.
11. **Gravitational Motion**
    - Study of gravity’s effect on the motion of objects.
12. **Gravity and Orbits Lab**
    - Investigation of gravitational forces and orbital mechanics.
13. **Energy**
    - Concepts of kinetic and potential energy and their transformations.
14. **Energy Skate Park Lab**
    - Visual and interactive exploration of energy conservation.
15. **Linear Momentum**
    - Study of momentum and its conservation in isolated systems.
16. **Momentum Lab**
    - Practical activities to explore conservation of momentum.
17. **Momentum in Collusions**
    - Analysis of momentum in collisions.

18. **Nanotechnology: Unveiling the Microscopic Marvels**
    - Introduction to the principles and applications of nanotechnology.
19. **Navigating the Landscape of Scientific Information**
    - Skills for finding, interpreting, and evaluating scientific information.
20. **Rotational Motion**
    - Study of angular motion and related forces.
21. **Rotational Motion Lab**
    - Experimental examination of rotational dynamics.
22. **Fluids**
    - Exploration of fluid dynamics including flow, pressure, and buoyancy.
23. **Fluids: Under Pressure and Density Labs**
    - Lab investigations into how pressure and density affect fluids.
24. **Waves**
    - Introduction to wave properties and types, including mechanical and electromagnetic waves.
25. **Pendulum Lab**
    - Analysis of pendulum motion to explore periodic motion and energy transfer.
26. **Sound**
    - Study of sound waves, their properties, and transmission.
27. **Sound Lab**
    - Experiments related to sound production, propagation, and reception.
28. **Light and the Electromagnetic Spectrum**
    - Overview of light as an electromagnetic wave and its spectrum.
29. **Electromagnetic Spectrum and Light Waves**

- Detailed exploration of the various types of electromagnetic waves.

30. **Properties of Light**
    - Investigation of light properties including reflection, refraction, and diffraction.
31. **Electric Charges**
    - Study of static electricity and charge interactions.
32. **Electric Charge Lab**
    - Experiments to explore electric forces and fields.
33. **Electric Current**
    - Concepts underlying electric current, voltage, and resistance.
34. **Circuits**
    - Analysis of electric circuits, including series and parallel configurations.
35. **Nuclear Physics**
    - Basics of nuclear reactions, radioactivity, and their applications.
36. **Quantum Model**
    - Introduction to quantum physics and the behavior of matter at microscopic levels.

Assessment and Grading: Students will be assessed through quizzes, lab reports, written assignments, and practical tests. The course includes quarterly exams to evaluate comprehensive understanding and progress.

Additional Resources:

- **Online Textbook and Resource Library**: Access to digital textbooks and supplemental materials.
- **Interactive Simulations**: Web-based simulations for enhanced learning of complex concepts.

Social Studies

World History II

Course Description: This asynchronous World History II course for high school students offers a comprehensive overview of global history from 1500 AD to the present. Designed to facilitate self-paced learning, the course explores major historical events, cultural movements, and significant political shifts around the world. Through engaging online materials and interactive assessments, students will develop a deeper understanding of how historical events are interconnected and how they have shaped the modern world.

Course Objectives:

- To understand key events and developments in world history from 1500 AD to the contemporary period.
- To analyze the impacts of historical events on societies, cultures, and politics across different regions.
- To develop critical thinking and analytical skills by evaluating primary and secondary sources.
- To enhance writing and historical argumentation skills through structured assignments.

Units and Topics:

1. **A World History Overview of 1500**
    - Introduction to the global historical landscape around the year 1500.
2. **Reformation's Impact on Western Civilization**
    - Exploration of the Reformation and its effects on religion, society, and politics in Western Europe.
3. **The European Age of Exploration**
    - Study of European explorations, discoveries, and their consequences for global trade and interaction.
4. **Europe and Russia I**

- Detailed analysis of the political, social, and cultural developments in Europe and Russia across two units.

5. **Europe and Russia II**
    - Detailed analysis of the political, social, and cultural developments in Europe and Russia across two units.
6. **Asian Empires I**
    - Examination of major Asian empires and their influence on regional and world history.
7. **Asian Empires II**
    - Examination of major Asian empires and their influence on regional and world history.
8. **Sub-Saharan Africa**
    - Overview of the historical developments in sub-Saharan Africa and their global implications.
9. **The Expansion of Imperialism**
    - Investigation of the causes and effects of European imperial expansion in the 19th and early 20th centuries.
10. **Consequences of Imperialism**
    - Analysis of the long-term impacts of imperialism on colonized regions.
11. **What Caused World War I?**
    - Exploration of the complex causes leading to the outbreak of World War I.
12. **The Russian Revolution**
    - Study of the events and significance of the Russian Revolution.
13. **World War I**
    - Detailed coverage of the events, strategies, and outcomes of World War I.

14. **The Treaty of Versailles and Its Consequences**
    - Examination of the peace treaty and its long-term effects on Europe and the world.
15. **The Unanswered Threats of the 1930s**
    - Analysis of global political tensions and events leading up to World War II.
16. **World War II**
    - Comprehensive study of World War II, including major battles, key figures, and geopolitical shifts.
17. **The Tragedy of the Holocaust**
    - In-depth exploration of the Holocaust and its impact on history and humanity.
18. **Historical Thinking Skills I Assessment**
    - Mid-course evaluation of students' historical analysis and thinking skills.
19. **Multinational Organizations**
    - Study of the role and influence of international organizations in post-war global governance.
20. **The Division of Palestine**
    - Investigation into the partition of Palestine and the ensuing conflicts.
21. **The Cold War: Part 1**
    - Detailed examination of the origins, major events, and conclusion of the Cold War.
22. **The Cold War: Part 2**
    - Detailed examination of the origins, major events, and conclusion of the Cold War.
23. **The Cold War in Vietnam and Afghanistan**

- Analysis of Cold War conflicts in Vietnam and Afghanistan and their broader implications.

24. **China Takes a Great Leap Forward**
    - Study of China's political and economic transformations under Communist rule.
25. **The Decolonization of India**
    - Overview of India's struggle for independence and its effects.
26. **Japan: From Defeated Nation to Economic Power**
    - Exploration of Japan's post-World War II recovery and economic boom.
27. **The Resurgence of Western Europe**
    - Study of Western Europe's economic recovery and integration after World War II.
28. **The Fall of the Soviet Union**
    - Detailed analysis of the events leading to the dissolution of the Soviet Union.
29. **An Era of Change for Eastern Europe**
    - Examination of the political and social changes in Eastern Europe after the Cold War.
30. **Islamic Nationalism and the Middle East**
    - Study of the rise of Islamic nationalism and its effects on Middle Eastern geopolitics.
31. **The Liberation of Africa**
    - Overview of the African decolonization process.
32. **The Struggle to End Apartheid**
    - In-depth study of apartheid in South Africa and the global movement to end it.
33. **Forces of Change in Latin America**

- Exploration of political and social changes in Latin America.

34. **Terrorism and the Multipolar World**
    - Analysis of the impact of terrorism and the shift towards a multipolar global order.
35. **Five Major World Religions**
    - Comparative study of the five major world religions and their historical and contemporary significance.
36. **Historical Thinking Skills II Assessment**
    - Final evaluation of students' mastery of historical thinking and analytical skills.

Assessment and Grading: Students will be evaluated through a mix of quizzes, written assignments, and two major assessments focusing on historical thinking skills. Assignments will require critical analysis of historical events, interpretation of primary sources, and development of coherent historical arguments.

Virginia and United States History

Course Description: This asynchronous course provides an in-depth examination of Virginia and United States history from pre-colonial times to the present. Designed for high school students, the course blends the specific history of Virginia with the broader American experience to give students a comprehensive view of the social, political, and economic developments that have shaped the region and the country. Through engaging with primary sources, critical thinking activities, and multimedia content, students will gain a robust understanding of historical events and their impacts.

Course Objectives:

- To understand key historical events in Virginia and United States history and their interconnections.
- To develop skills in analyzing primary sources and constructing historical arguments.
- To explore the diverse cultural, social, and political landscapes that have influenced Virginia and the U.S.
- To critically evaluate historical narratives and their relevance to contemporary issues.

Units and Topics:

1. **Engaging in Primary Sources**
    - Introduction to using primary sources in historical inquiry.
2. **Early North American Indigenous Cultures**
    - Overview of the indigenous cultures prior to European contact.
3. **Early Exploration**
    - Study of early explorations in North America and their impacts.
4. **Global Influences and Expeditions**
    - Exploration of the global context for the age of exploration.

5. **The Thirteen Colonies**
    - Detailed look at the establishment and development of the Thirteen Colonies.
6. **The Political and Religious Landscape of the Colonies**
    - Examination of the political and religious factors that shaped the early colonies.
7. **African Roots and American Chains**
    - Study of African American history from the roots in Africa to slavery in America.
8. **Indigenous Alliances and Colonial Encounters**
    - Analysis of the interactions between indigenous peoples and European settlers.
9. **The Declaration of Independence**
    - In-depth study of the events leading to and the significance of the Declaration of Independence.
10. **The Articles of Confederation**
    - Overview of America's first federal constitution and its limitations.
11. **The Constitution of the United States**
    - Comprehensive study of the drafting and ratification of the U.S. Constitution.
12. **The Rights and Powers: U.S. Constitutional Foundations**
    - Examination of the foundational principles and rights established by the Constitution.
13. **The War of 1812**
    - Exploration of the causes, major events, and consequences of the War of 1812.
14. **Westward Expansion in America**

- Study of the motives, processes, and effects of westward expansion.

15. **The Impact on American Indian Nations**
    - Analysis of how westward expansion impacted Native American communities.
16. **Development and Abolition of Slavery**
    - Examination of the rise and fall of slavery in the United States.
17. **The Civil War Begins**
    - Detailed look at the causes and early battles of the Civil War.
18. **The Civil War Ends**
    - Study of the concluding years of the Civil War and its outcomes.
19. **The Reconstruction Era**
    - Analysis of the post-Civil War Reconstruction period and its challenges.
20. **Post-Reconstruction Virginia: A New Landscape**
    - Overview of Virginia's transformation in the post-Reconstruction era.
21. **Westward Expansion and Immigration**
    - Study of the continuing westward expansion and the waves of immigration in the late 19th century.
22. **Urbanization and Industrialization**
    - Examination of the rise of urban centers and industrial economies.
23. **The Progressive Era**
    - Analysis of the Progressive Era reforms and their impacts.
24. **America Becomes a World Power**
    - Study of America's emergence as a global power in the early 20th century.
25. **America from the 20s to the New Deal**

- Overview of the Roaring Twenties, the Great Depression, and the New Deal.

26. **The Great Depression and the New Deal**
    - In-depth look at the economic challenges and responses during the Great Depression.
27. **World War II**
    - Comprehensive study of the events and significance of World War II.
28. **World War II and its Many Faces**
    - Examination of different aspects and perspectives of World War II.
29. **The Cold War: Early Years and Policies**
    - Analysis of the origins and early years of the Cold War.
30. **The End of the Cold War**
    - Study of the events leading to the end of the Cold War.
31. **The Civil Rights Movement**
    - Detailed examination of the Civil Rights Movement in the United States.
32. **The Civil Rights Movement Through Charts, Graphs, and Pictures**
    - Visual exploration of the impacts and achievements of the Civil Rights Movement.
33. **Historical Thinking and Constructing Arguments**
    - Development of skills in historical thinking and argument construction.
34. **Late 20th and Early 21st Century America**
    - Overview of recent American history and current issues.
35. **The Evolving Role of the U.S. Government in the Economy**
    - Study of how the role of government in the economy has changed over time.
36. **Historical Thinking Skills Assessment**

- Final assessment to evaluate students' mastery of historical thinking skills.

Assessment and Grading: Students will be assessed through quizzes, written assignments, projects, and two major assessments focusing on their ability to engage with and analyze historical content. These assessments will also evaluate their skills in using primary sources and constructing historical arguments.

Additional Resources:

- **Online Textbook and Resource Library**: Access to a comprehensive digital textbook and supplementary materials.
- **Interactive Timelines and Maps**: Tools to help visualize and contextualize historical events.

Virginia and United States Government

Course Description: This asynchronous course provides a comprehensive overview of the structures, principles, and functions of both the Virginia and United States governments. Through a series of units, students will explore historical foundations, key documents, governmental branches, civic responsibilities, electoral processes, legal systems, economic frameworks, and foreign policy implications. Emphasis will be placed on critical thinking, responsible citizenship, and the application of knowledge to contemporary issues.

Syllabus:

Unit 1: Historical Thinking & Responsible Citizenship

- Introduction to historical thinking and its relevance to citizenship
- Development of critical thinking skills for informed decision-making

Unit 2: Current Issues & Data Sources

- Examination of contemporary societal issues
- Utilization of reliable data sources for understanding current events

Unit 3: Influence of Athenian Democracy and Roman Republic

- Analysis of the impact of ancient democratic systems on modern governance
- Comparison between Athenian democracy and the Roman Republic

Unit 4: Foundations of American Government

- Exploration of the historical events leading to the formation of the American government
- Understanding the principles underlying the establishment of the United States

Unit 5: Foundational Documents of the American Government

- Study of key documents such as the Declaration of Independence and the Constitution
- Analysis of their significance in shaping American governance

Unit 6: Foundations of Freedom

- Examination of fundamental freedoms guaranteed by the Constitution
- Discussion on the evolution of civil liberties in the United States

Unit 7: The Ideals of Democracy

- Exploration of democratic ideals and their manifestation in American society
- Critical analysis of challenges to democratic principles

Unit 8: Understanding Limited and Unlimited Government

- Differentiation between limited and unlimited government models
- Evaluation of their implications for individual rights and government power

Unit 9: Fundamental Concepts of Democracy

- Examination of core democratic principles such as equality, representation, and participation
- Discussion on their application in contemporary governance

Unit 10: Preamble and Articles I, II, & III

- In-depth study of the Preamble and Articles of the Constitution outlining the structure of the federal government
- Analysis of the powers and responsibilities of each branch

Unit 11: The Three Branches of Government

- Overview of the legislative, executive, and judicial branches
- Examination of their roles, interactions, and checks and balances

Unit 12: Federalism

- Understanding the division of powers between the federal and state governments
- Analysis of federalism's impact on policy-making and governance

Unit 13: The Ratification of the Constitution

- Study of the ratification process and debates surrounding the Constitution
- Evaluation of its significance in shaping American democracy

Unit 14: Foundations and Values of the American Republic

- Exploration of the values and principles underlying the American republic
- Discussion on their relevance in contemporary society

Unit 15: Constitutional Democracy

- Analysis of the principles and practices of constitutional democracy
- Examination of constitutionalism and its importance in safeguarding rights

Unit 16: From Naturalization to Civic Participation

- Understanding the naturalization process and citizenship rights
- Exploration of civic engagement and responsibilities

Unit 17: Navigating Public Roles and Responsibilities

- Discussion on the role of citizens in a democratic society
- Examination of avenues for civic participation and activism

Unit 18: VA & US Government Exam #1

Unit 19: Voting Rights in the United States

- Study of the historical evolution of voting rights
- Analysis of contemporary voting rights issues and challenges

Unit 20: Voting and Elections

- Examination of the electoral process in the United States
- Analysis of voting systems, voter behavior, and election outcomes

Unit 21: Presidential Election Process

- In-depth study of the presidential election process
- Evaluation of the Electoral College system and its implications

Unit 22: Article I: Legislative Branch

- Analysis of the structure and functions of the legislative branch
- Examination of the lawmaking process and congressional powers

Unit 23: Article II: Executive Branch

- Overview of the structure and powers of the executive branch
- Study of the presidency, including roles, responsibilities, and limitations

Unit 24: Article III: Judicial Branch

- Understanding the structure and functions of the judicial branch
- Analysis of the role of the Supreme Court and the federal judiciary

Unit 25: Virginia's Blueprint: Branches & Powers

- Exploration of the structure and powers of Virginia's government
- Comparison with the federal system and analysis of state sovereignty

Unit 26: Understanding the Virginia Lawmaking Process

- Study of the legislative process in Virginia
- Analysis of the roles of the General Assembly and the governor

Unit 27: Virginia's Local Government

- Overview of the structure and functions of local government in Virginia
- Examination of local governance, services, and citizen participation

Unit 28: Civil Liberties and Civil Rights

- Understanding the concepts of civil liberties and civil rights
- Analysis of landmark Supreme Court cases and their impact on civil rights

Unit 29: The Supreme Court and the Bill of Rights

- Study of the Bill of Rights and its interpretation by the Supreme Court
- Examination of the protection of individual liberties and freedoms

Unit 30: Foreign Policy and Virginia's Role

- Exploration of U.S. foreign policy objectives and strategies

- Analysis of Virginia's role in international relations and trade

Unit 31: Economic Systems: An American Perspective

- Overview of economic systems, including capitalism and socialism
- Examination of economic principles and their application in the United States

Unit 32: Comparing Capitalism to Socialism and Communism

- Comparative analysis of capitalism, socialism, and communism
- Evaluation of their strengths, weaknesses, and implications for society

Unit 33: Understanding the American Market System

- Study of the American market economy and its characteristics
- Analysis of market forces, competition, and regulation

Unit 34: Government's Role in the American Economy

- Examination of government intervention in the economy
- Analysis of fiscal and monetary policies and their impact on economic stability

Unit 35: Fiscal and Monetary Policy

- Understanding of fiscal and monetary policy tools
- Analysis of their use in addressing economic challenges and promoting growth

Unit 36: VA and US Government Exam #2

This syllabus provides a structured framework for understanding the complexities of both Virginia and United States government, equipping students with the knowledge and skills necessary for informed citizenship and civic engagement.

Math

Algebra I

Course Description: Algebra I is an asynchronous course designed to provide students with a solid foundation in algebraic concepts and problem-solving skills. Through a series of units, students will explore fundamental topics such as expressions, equations, functions, and graphing techniques. Emphasis will be placed on understanding key algebraic principles and applying them to real-world scenarios. By the end of the course, students will have developed the necessary skills to solve a variety of algebraic equations and interpret mathematical representations.

Syllabus:

Unit 1: Combining Like Terms and the Distributive Property

- Introduction to combining like terms and the distributive property
- Simplifying algebraic expressions using these principles

Unit 2: Expressions: Part I

- Understanding algebraic expressions and their components
- Evaluating expressions and identifying terms

Unit 3: Expressions: Part II

- Advanced manipulation of algebraic expressions
- Simplifying complex expressions using multiple techniques

Unit 4: Law of Exponents: Part I

- Introduction to exponents and their properties
- Applying exponent rules to simplify expressions

Unit 5: Law of Exponents: Part II

- Further exploration of exponent rules and their applications
- Solving problems involving exponents

Unit 6: Polynomials: Part I

- Definition and classification of polynomials
- Addition and subtraction of polynomials

Unit 7: Polynomials: Part II

- Multiplication of polynomials using various methods
- Application of polynomial operations to real-world problems

Unit 8: Polynomials: Part III

- Division of polynomials and polynomial long division
- Finding polynomial factors and zeros

Unit 9: Multiplying Polynomials

- Mastery of polynomial multiplication techniques
- Solving problems involving products of polynomials

Unit 10: Complete Factoring and Solving Equations

- Understanding factoring techniques for quadratic expressions
- Solving equations using factoring methods

Unit 11: Solving Equations, Part One

- Solving linear equations with one variable
- Application of solving techniques to word problems

Unit 12: Solving Equations, Part Two

- Advanced techniques for solving equations with multiple variables
- Systems of equations and their solutions

Unit 13: Solving Linear Equations Part I

- Methods for solving linear equations
- Application of solving techniques to linear equations

Unit 14: Solving Linear Equations Part II

- Further exploration of solving linear equations with fractions and decimals

- Application of solving techniques to real-world scenarios

Unit 15: Solving Linear Equations Part III

- Mastery of solving linear equations involving inequalities
- Graphical representation of solutions to linear inequalities

Unit 16: Functions

- Understanding the concept of a function and its notation
- Identification of functions from tables, graphs, and equations

Unit 17: Writing Linear Equations

- Writing linear equations in slope-intercept form
- Converting between different forms of linear equations

Unit 18: Graphing Linear Functions

- Graphing linear functions on the coordinate plane
- Determining slope and intercepts from equations and graphs

Unit 19: Slope

- Understanding the concept of slope and its significance
- Calculation of slope from graphs, tables, and equations

Unit 20: Graphing Linear Equations and Inequalities

- Graphical representation of linear equations and inequalities
- Interpretation of graphs in the context of real-world situations

Unit 21: Solving Linear Inequalities

- Techniques for solving and graphing linear inequalities
- Application of inequality solving to practical problems

Unit 22: Direct and Inverse Variation

- Understanding direct and inverse variation relationships
- Solving problems involving direct and inverse variation

Unit 23: Systems of Equations

- Solving systems of linear equations using various methods
- Application of systems of equations to real-world scenarios

Unit 24: System of Inequalities

- Solving systems of linear inequalities
- Graphical representation and interpretation of solutions

Unit 25: Simplifying Radicals

- Definition and properties of radicals
- Simplifying radical expressions and solving radical equations

Unit 26: Graphing Quadratic Functions in Standard Form

- Graphing quadratic functions in standard form
- Identifying key features of quadratic functions from their equations

Unit 27: Graphing Quadratic Functions in Vertex and Intercept Form

- Graphical representation of quadratic functions in vertex and intercept form
- Transformation of quadratic graphs

Unit 28: Solving Quadratic Equations by Graphing

- Finding solutions to quadratic equations using graphical methods
- Interpretation of quadratic graphs and their intersections with axes

Unit 29: Solving Quadratic Equations Using Factoring and Square Roots

- Factoring quadratic expressions and solving quadratic equations
- Application of factoring techniques to real-world problems

Unit 30: The Quadratic Formula

- Derivation and application of the quadratic formula
- Solving quadratic equations using the quadratic formula

Unit 31: Solving Quadratic Equations

- Comprehensive review of techniques for solving quadratic equations
- Application of solving methods to quadratic word problems

Unit 32: Quadratic Function Word Problems

- Solving real-world problems involving quadratic functions
- Interpretation of solutions in the context of practical scenarios

Unit 33: Exponential Functions

- Introduction to exponential functions and their properties
- Graphical representation and interpretation of exponential growth and decay

Unit 34: Geometric Sequences

- Understanding geometric sequences and their properties
- Calculation of terms and sums in geometric sequences

Unit 35: Scatter Plots, Histograms, Dot Plots, and Two-Way Tables

- Construction and interpretation of scatter plots, histograms, dot plots, and two-way tables
- Analysis of data distributions and relationships

Unit 36: Measures of Center and Spread

- Calculation and interpretation of measures of central tendency (mean, median, mode) and dispersion (range, interquartile range, standard deviation)
- Application of statistical concepts to real-world data analysis

This syllabus provides a structured framework for mastering the fundamental concepts of Algebra I, equipping students with the necessary skills to succeed in further mathematical studies and real-world problem-solving.

Geometry

Course Description: Geometry is an asynchronous course that explores the fundamental principles of geometric shapes, spatial reasoning, and problem-solving techniques. Through a series of units, students will investigate the properties of lines, angles, polygons, circles, and three-dimensional figures. Emphasis will be placed on understanding geometric relationships, applying geometric concepts to real-world situations, and developing logical reasoning skills. By the end of the course, students will have a solid foundation in geometry and the ability to analyze and solve a variety of geometric problems.

Syllabus:

Unit 1: Tools of Geometry - Lines, Planes, and Rays

- Introduction to basic geometric terms and concepts
- Understanding lines, planes, and rays in geometric contexts

Unit 2: Tools of Geometry - Segments

- Definition and properties of line segments
- Measurement and construction of line segments

Unit 3: Tools of Geometry - Angles

- Introduction to angles and their measurement
- Classification of angles based on their measures

Unit 4: Angles Formed by Intersecting Lines

- Exploration of angles formed by intersecting lines
- Understanding vertical angles, adjacent angles, and linear pairs

Unit 5: Parallel and Transversal Lines

- Definition of parallel and transversal lines
- Identification of corresponding angles, alternate interior angles, and alternate exterior angles

Unit 6: Angles Formed by Transversal Intersecting Parallel Lines

- Analysis of angles formed when a transversal intersects parallel lines
- Application of angle relationships to solve problems

Unit 7: Congruence

- Understanding the concept of congruence in geometry
- Identifying congruent figures and their properties

Unit 8: Triangles (Triangle Sum Theorem)

- Introduction to triangles and their properties
- Exploration of the Triangle Sum Theorem and its applications

Unit 9: Triangles (Isosceles and Equilateral)

- Properties of isosceles and equilateral triangles
- Identification of special properties and relationships within these triangles

Unit 10: Triangle Relationships

- Analysis of relationships between angles and sides in triangles
- Application of triangle properties to solve problems

Unit 11: Polygons

- Definition and classification of polygons
- Identification of polygon properties and relationships

Unit 12: Polygon Angle Sum Theorem

- Exploration of the Polygon Angle Sum Theorem
- Calculation of the sum of interior angles in polygons

Unit 13: Quadrilaterals

- Properties and classification of quadrilaterals
- Identification of special quadrilaterals and their properties

Unit 14: Parallelograms, Rectangles, and Rhombuses

- Properties and relationships within parallelograms, rectangles, and rhombuses
- Application of properties to solve problems

Unit 15: Squares, Trapezoids, and Kites

- Characteristics and properties of squares, trapezoids, and kites
- Identification of special properties and relationships within these quadrilaterals

Unit 16: Circles

- Introduction to circles and their properties
- Definition of key terms related to circles

Unit 17: Circles - Arcs and Central Angles

- Understanding arcs, central angles, and their measures
- Calculation of arc length and area of sectors

Unit 18: Circles: Arcs and Inscribed Angles

- Exploration of inscribed angles and their properties
- Relationship between inscribed angles and intercepted arcs

Unit 19: Circles: Area of Circles and Sectors

- Calculation of the area of circles and sectors
- Application of circle properties to solve problems

Unit 20: Circles: Writing an Equation of a Circle

- Understanding the standard form of the equation of a circle
- Writing and graphing equations of circles

Unit 21: Transformations

- Introduction to geometric transformations
- Understanding translations, reflections, rotations, and dilations

Unit 22: Transformation Rules

- Rules and properties of geometric transformations
- Application of transformation rules to geometric figures

Unit 23: Similar Figures

- Definition of similar figures and their properties
- Identification of corresponding angles and proportional sides in similar figures

Unit 24: Congruent Figures

- Properties and characteristics of congruent figures
- Identification of congruent corresponding parts

Unit 25: Ratios and Proportional

- Understanding ratios and proportional relationships
- Application of ratios and proportions to solve geometric problems

Unit 26: Trigonometry with Right Triangles: Sine, Cosine, and Tangent Ratios

- Introduction to trigonometric ratios in right triangles
- Calculation of sine, cosine, and tangent ratios

Unit 27: Using Trigonometric Ratios to Find a Side of a Right Triangle

- Application of trigonometric ratios to find missing side lengths in right triangles
- Solving problems involving angle of elevation and angle of depression

Unit 28: Trigonometry with Right Triangles: Using Inverse Trigonometry

- Introduction to inverse trigonometric functions
- Application of inverse trigonometry to find angles in right triangles

Unit 29: Area: Squares and Rectangles

- Calculation of the area of squares and rectangles

- Application of area formulas to solve problems

Unit 30: Area: Triangles and Quadrilaterals

- Calculation of the area of triangles and quadrilaterals
- Application of area formulas to solve problems

Unit 31: Volume: Prism and Cubes

- Introduction to volume of prisms and cubes
- Calculation of volume using base area and height

Unit 32: Volume of Cylinders

- Calculation of the volume of cylinders
- Application of volume formulas to solve problems

Unit 33: Volume: Cones and Spheres

- Calculation of the volume of cones and spheres
- Application of volume formulas to solve problems

Unit 34: Volume: Composite Figures

- Calculation of volume for composite figures
- Decomposition of composite figures into simpler shapes to find volume

Unit 35: Volume (Special Topic)

- Exploration of special topics related to volume
- Application of volume concepts to practical scenarios

Unit 36: Logic and Reasoning

- Introduction to logical reasoning in geometry
- Deductive reasoning and proof techniques in geometric contexts

This syllabus provides a comprehensive overview of geometry, covering a wide range of topics from basic geometric concepts to advanced trigonometry and

volume calculations. Through exploration and problem-solving activities, students will develop a deep understanding of geometric principles and their applications.

Algebra II

Course Description: Algebra II is an asynchronous course that delves into advanced algebraic concepts and applications. Through a series of units, students will explore equations, inequalities, functions, polynomials, matrices, probability, and statistics. Emphasis will be placed on problem-solving skills, mathematical reasoning, and real-world applications. By the end of the course, students will have a thorough understanding of algebraic principles and their relevance in various contexts.

Syllabus:

Unit 1: Solving Equations and Applications

- Mastery of solving equations and application to real-world scenarios
- Understanding various methods for solving equations

Unit 2: Inequalities and Absolute Value Equations

- Exploration of inequalities and absolute value equations
- Solution techniques and graphical representations

Unit 3: Systems of Equations and Linear Equalities

- Understanding systems of equations and linear equalities
- Solution methods including substitution, elimination, and graphing

Unit 4: Functions and Inverses of Functions

- Definition and properties of functions
- Investigation of inverse functions and their properties

Unit 5: Special Functions and Transformations

- Introduction to special functions such as piecewise, step, and absolute value functions
- Exploration of transformations of functions

Unit 6: Quadratic Functions

- Study of quadratic functions and their characteristics
- Graphing quadratic functions and identifying key features

Unit 7: Solving Quadratic Equations

- Techniques for solving quadratic equations
- Application of quadratic equations to real-world problems

Unit 8: Complex Numbers

- Introduction to complex numbers and their properties
- Operations with complex numbers and their applications

Unit 9: More Quadratic Functions

- Advanced topics in quadratic functions including vertex form and completing the square
- Analysis of quadratic functions and their graphs

Unit 10: Curve Fitting and Quadratic Inequalities

- Curve fitting techniques and quadratic inequalities
- Application of curve fitting to data analysis

Unit 11: Logarithmic Functions

- Understanding logarithmic functions and their properties
- Solving logarithmic equations and applications

Unit 12: Natural Logarithms

- Study of natural logarithms and their properties
- Application of natural logarithms to exponential growth and decay

Unit 13: Exponential Growth and Decay

- Analysis of exponential growth and decay models
- Application of exponential functions to real-world scenarios

Unit 14: Polynomial Functions

- Definition and properties of polynomial functions
- Graphing polynomial functions and identifying key features

Unit 15: Mastering Polynomial Operations

- Mastery of polynomial operations including addition, subtraction, multiplication, and division
- Application of polynomial operations to polynomial expressions

Unit 16: Techniques for Factoring and Dividing Polynomials

- Various techniques for factoring and dividing polynomials
- Application of factoring techniques to polynomial equations

Unit 17: Understanding Polynomial Expressions and Identities

- Investigation of polynomial expressions and identities
- Simplification and manipulation of polynomial expressions

Unit 18: Graphing and Solving Polynomial Equations

- Graphical representation of polynomial equations
- Solution methods for polynomial equations

Unit 19: Solving Polynomial Equations

- Advanced techniques for solving polynomial equations
- Application of polynomial equations to real-world problems

Unit 20: Solving Systems with Matrix Equations

- Introduction to matrices and matrix operations
- Solution of systems of equations using matrices

Unit 21: Rational Expressions and Graphs

- Definition and properties of rational expressions
- Graphical representation of rational functions

Unit 22: Rational Expressions and Equations

- Solution techniques for rational equations
- Application of rational expressions to real-world problems

Unit 23: Radical Expressions and Equations

- Understanding radical expressions and equations
- Solution methods for radical equations

Unit 24: Hyperbolas and Solving Quadratic Systems

- Study of hyperbolas and their properties
- Solution techniques for quadratic systems of equations

Unit 25: Probability: Fundamental Counting Principle, Permutations, Combinations

- Introduction to probability concepts including the fundamental counting principle, permutations, and combinations
- Application of probability principles to counting problems

Unit 26: Independent and Dependent Events; Conditional Probability

- Analysis of independent and dependent events
- Calculation of conditional probability and application to real-world scenarios

Unit 27: Probability and Statistics

- Understanding of probability distributions and statistical concepts
- Application of probability and statistics to data analysis

Unit 28: Permutations and Combinations

- Study of permutations and combinations
- Application of permutations and combinations to counting problems

Unit 29: Normal Distribution

- Introduction to the normal distribution and its properties
- Application of the normal distribution to probability problems

Unit 30: Z-Scores

- Definition and interpretation of z-scores
- Calculation and application of z-scores in statistics

Unit 31: Understanding Data

- Exploration of data collection methods and sources
- Interpretation and analysis of data sets

Unit 32: Descriptive Statistics

- Calculation and interpretation of descriptive statistics including measures of central tendency and dispersion
- Application of descriptive statistics to data analysis

Unit 33: Data Visualization

- Techniques for visualizing data including histograms, box plots, and scatter plots
- Interpretation of data visualizations and communication of findings

Unit 34: Probability Basics

- Review of basic probability concepts and terminology
- Application of probability basics to solving probability problems

Unit 35: Probability Distributions

- Study of probability distributions including discrete and continuous distributions
- Calculation of probabilities using probability distributions

Unit 36: Inferential Statistics

- Introduction to inferential statistics and hypothesis testing
- Application of inferential statistics to drawing conclusions from data

This syllabus provides a comprehensive overview of Algebra II, covering a wide range of topics from advanced algebraic concepts to probability and statistics.

Through exploration and problem-solving activities, students will develop a deep understanding of algebraic principles and their applications.

Probability and Statistics

Course Description: Probability and Statistics is an asynchronous course designed to provide students with a comprehensive understanding of fundamental statistical concepts and their applications. Through a series of units, students will explore topics such as ratios, percentages, statistical measures, probability, and data analysis. Emphasis will be placed on real-life applications, problem-solving skills, and critical thinking. By the end of the course, students will be equipped with the knowledge and skills to analyze data, make informed decisions, and interpret statistical information.

Syllabus:

Unit 1: Ratios

- Introduction to ratios and their applications
- Understanding the relationship between quantities using ratios

Unit 2: Tape Diagrams

- Use of tape diagrams to represent ratios and solve problems
- Application of tape diagrams to real-life situations

Unit 3: Using Ratio Tables

- Construction and interpretation of ratio tables
- Solving problems using ratio tables

Unit 4: Rates and Unit Rates

- Definition and calculation of rates and unit rates
- Application of rates to solve problems involving speed, distance, and time

Unit 5: Converting Measures

- Conversion between different units of measurement
- Application of measurement conversions to real-world scenarios

Unit 6: Identifying Proportional Relationships

- Recognition of proportional relationships in data sets
- Analysis of graphs and tables to identify proportional relationships

Unit 7: Writing and Solving Proportions

- Writing and solving proportions to solve problems
- Application of proportions to scale drawings and maps

Unit 8: Fractions in Real Life

- Application of fractions to real-life situations
- Interpretation of fractions in contexts such as recipes, budgets, and measurements

Unit 9: Decimals in Real Life

- Application of decimals to real-life scenarios
- Interpretation of decimal representations in contexts such as money and measurements

Unit 10: Percentages in Real Life

- Understanding percentages and their applications
- Interpretation of percentages in contexts such as discounts, taxes, and interest rates

Unit 11: Converting Fractions, Decimals, and Percentages

- Conversion between fractions, decimals, and percentages
- Application of conversion techniques to solve problems

Unit 12: The Percent Proportion

- Understanding the percent proportion and its applications
- Solving problems using the percent proportion

Unit 13: The Percent Equation

- Introduction to the percent equation and its applications

- Solving problems using the percent equation

Unit 14: Percent of Increase and Decrease

- Calculation of percent of increase and decrease
- Application of percent change to real-world situations

Unit 15: Discounts and Markups

- Understanding discounts, markups, and sales tax
- Calculation of final prices including discounts and markups

Unit 16: Simple Interest

- Introduction to simple interest and its applications
- Calculation of interest earned or paid on loans and investments

Unit 17: The Pythagorean Theorem

- Understanding the Pythagorean Theorem and its applications
- Application of the Pythagorean Theorem to solve problems involving right triangles

Unit 18: First Semester Exam

- Comprehensive review and assessment of concepts covered in the first semester

Unit 19: Introduction to Statistics

- Introduction to statistics and data analysis
- Understanding the importance of statistics in decision making

Unit 20: Statistical Mean

- Calculation and interpretation of the mean
- Application of the mean to summarize data sets

Unit 21: Measures of Center

- Exploration of measures of center including mean, median, and mode

- Comparison of different measures of center and their applications

Unit 22: Measures of Variation

- Calculation and interpretation of measures of variation including range and interquartile range
- Understanding the spread of data sets

Unit 23: Mean Absolute Variation

- Calculation and interpretation of mean absolute deviation
- Understanding variability in data sets

Unit 24: Probability

- Introduction to probability concepts and terminology
- Calculation of probabilities of simple and compound events

Unit 25: Experimental and Theoretical Probability

- Comparison of experimental and theoretical probability
- Calculation of probabilities using experimental and theoretical methods

Unit 26: Compound Events

- Analysis of compound events and their probabilities
- Calculation of probabilities of compound events using probability rules

Unit 27: Simulations

- Understanding simulations and their applications in probability
- Conducting simulations to estimate probabilities

Unit 28: Samples and Populations

- Definition of samples and populations in statistics
- Understanding the importance of representative samples

Unit 29: Using Random Samples to Describe Population

- Application of random sampling techniques to describe populations

- Calculation of statistics from random samples

Unit 30: Comparing Populations

- Comparison of populations using statistical measures
- Interpretation of differences between populations

Unit 31: Using Random Samples to Compare Populations

- Application of random sampling techniques to compare populations
- Statistical inference and hypothesis testing

Unit 32: Writing and Solving One-Step Equations

- Introduction to one-step equations and their solutions
- Application of one-step equations to solve problems

Unit 33: Solving Multi-Step Equations

- Techniques for solving multi-step equations
- Application of multi-step equations to solve real-world problems

Unit 34: Equations with Variables on Both Sides

- Understanding equations with variables on both sides
- Solution techniques for equations with variables on both sides

Unit 35: Rewriting Equations and Formulas

- Techniques for rewriting equations and formulas
- Application of equation rewriting to solve problems

Unit 36: Final Exam

- Comprehensive review and assessment of concepts covered in the course

This syllabus provides a structured framework for mastering the fundamental concepts of probability and statistics, equipping students with the necessary skills to analyze data, make informed decisions, and interpret statistical information.

Health and PE

Health 9

Course Description: Health 9 is designed to provide students with a comprehensive understanding of various aspects of health, including physical, mental, and social well-being. Through this asynchronous course, students will explore topics such as the endocrine system, nutrition, disease prevention, substance abuse, mental health, and social issues affecting health. The course aims to equip students with the knowledge and skills necessary to make informed decisions regarding their health and well-being.

Units:

Unit 1: Endocrine System

- Understanding the structure and function of the endocrine system.
- Exploring the role of hormones in regulating bodily functions.
- Investigating common endocrine disorders and their management.

Unit 2: Understanding Vitamins, Minerals, and Healthy Food Choices

- Identifying essential vitamins and minerals and their importance in maintaining health.
- Analyzing dietary choices and their impact on overall well-being.
- Developing strategies for making healthy food choices.

Unit 3: Eating, Sleeping, and Screen Time

- Examining the importance of balanced nutrition, adequate sleep, and managing screen time.
- Understanding the effects of poor eating habits, sleep deprivation, and excessive screen time on health.
- Implementing strategies for improving eating, sleeping, and screen time habits.

Unit 4: Preventing Chronic Disease

- Investigating common chronic diseases and their risk factors.

- Exploring preventive measures and lifestyle choices to reduce the risk of chronic diseases.
- Analyzing the impact of chronic diseases on individuals and society.

Unit 5: Herd Immunity, Epidemics, and Pandemics

- Understanding the concepts of herd immunity, epidemics, and pandemics.
- Exploring historical and contemporary examples of infectious diseases.
- Examining strategies for preventing and managing infectious disease outbreaks.

Unit 6: Promote Vision, Hearing, and Dental Health

- Discussing the importance of maintaining good vision, hearing, and dental health.
- Identifying common vision, hearing, and dental disorders and their prevention.
- Implementing practices for promoting optimal vision, hearing, and dental health.

Unit 7: Substance Abuse and Injury Risk

- Exploring the effects of substance abuse on physical and mental health.
- Discussing the risks associated with substance abuse, including injuries and accidents.
- Developing strategies for preventing substance abuse and reducing injury risk.

Unit 8: The Opioid Crisis and Teen Risk

- Analyzing the opioid crisis and its impact on individuals and communities.
- Discussing the factors contributing to teen opioid use and addiction.
- Exploring prevention and intervention strategies for addressing the opioid crisis among teens.

Unit 9: Brain Injuries and Concussions

- Understanding the causes and consequences of brain injuries, including concussions.
- Discussing the importance of early recognition and management of brain injuries.
- Exploring prevention strategies and rehabilitation techniques for brain injuries.

Unit 10: Understanding, Identifying, and Reporting Threats

- Identifying different types of threats to health and safety.
- Discussing strategies for recognizing and responding to threats.
- Exploring the role of reporting systems in addressing threats effectively.

Unit 11: Time Management

- Understanding the importance of time management in maintaining overall well-being.
- Exploring strategies for prioritizing tasks, managing schedules, and reducing stress.
- Developing skills for effective time management in various aspects of life.

Unit 12: Impact of Social Media and Online Behavior

- Analyzing the influence of social media and online behavior on mental health and well-being.
- Discussing the risks associated with excessive screen time and online interactions.
- Exploring strategies for promoting positive online behavior and managing digital wellness.

Unit 13: Social and Emotional Skills: Mental Illness and Challenges

- Discussing common mental health disorders and their impact on individuals.
- Exploring stigma surrounding mental illness and strategies for promoting mental health awareness.

- Developing social and emotional skills for supporting individuals experiencing mental health challenges.

Unit 14: Social and Emotional Skills: Conflict Resolution

- Understanding the importance of effective communication and conflict resolution skills.
- Exploring strategies for resolving conflicts peacefully and building healthy relationships.
- Developing skills for managing interpersonal conflicts in various settings.

Unit 15: Violence Prevention: Gang Involvement

- Discussing the risks associated with gang involvement and violence.
- Exploring factors contributing to gang membership and recruitment.
- Developing strategies for violence prevention and promoting positive alternatives to gang involvement.

Unit 16: Community Health: Health-Related Social Issues

- Analyzing social determinants of health and their impact on community well-being.
- Discussing health-related social issues such as poverty, inequality, and access to healthcare.
- Exploring strategies for addressing health disparities and promoting community health equity.

Unit 17: Environmental Health: Global Environmental Health Issues

- Understanding the relationship between human health and the environment.
- Exploring global environmental health issues such as pollution, climate change, and infectious diseases.
- Discussing individual and collective actions for promoting environmental health and sustainability.

Unit 18: Health 9 Exam

- Reviewing key concepts and topics covered throughout the course.
- Assessing students' understanding of health-related knowledge and skills.
- Providing feedback and opportunities for reflection on personal health behaviors and choices.

Health 10

Course Description: Health 10 is designed to further students' understanding of various aspects of health, with a focus on physical, mental, and social well-being. Through this asynchronous course, students will explore topics such as the lymphatic system, diet diversity, sleep, technology's impact on health, social determinants of health, mental health, relationships, and community health dynamics. The course aims to empower students to make informed decisions regarding their health, relationships, and community engagement.

Units:

Unit 1: The Lymphatic System

- Understanding the structure and function of the lymphatic system.
- Exploring the role of the lymphatic system in immunity and fluid balance.
- Investigating common lymphatic disorders and their management.

Unit 2: A Variety of Diets

- Exploring different dietary patterns and their cultural, environmental, and health implications.
- Analyzing the nutritional value of various diets and their impact on health outcomes.
- Discussing strategies for adopting balanced and sustainable dietary practices.

Unit 3: Sleep, Noncommunicable Diseases, and Health Choices

- Examining the relationship between sleep quality, noncommunicable diseases, and lifestyle choices.
- Understanding the importance of sleep hygiene in maintaining overall health and well-being.
- Developing strategies for improving sleep quality and promoting healthy lifestyle choices.

Unit 4: Tech and Screenings for Lifelong Health

- Discussing the benefits and challenges of technology in promoting lifelong health.
- Exploring the role of health screenings in early detection and prevention of diseases.
- Analyzing the impact of technology on health behaviors and outcomes.

Unit 5: Social Determinants of Health

- Investigating social, economic, and environmental factors that influence health outcomes.
- Understanding health disparities and their underlying determinants.
- Exploring strategies for addressing social determinants of health and promoting health equity.

Unit 6: Teen Choices: Substance Use and Health Impacts

- Discussing the prevalence and consequences of substance use among teens.
- Exploring factors influencing teen substance use decisions and behaviors.
- Developing strategies for making healthy choices and resisting peer pressure related to substance use.

Unit 7: Teen Driving

- Understanding the risks associated with teen driving and motor vehicle accidents.
- Exploring safe driving practices and strategies for reducing the risk of accidents.
- Discussing the importance of responsible decision-making and following traffic laws.

Unit 8: Navigating Online Safety

- Discussing potential online risks and threats to personal safety and privacy.
- Exploring strategies for protecting oneself online and maintaining digital well-being.

- Analyzing the impact of online behavior on mental and emotional health.

Unit 9: Mental Health

- Examining the concept of mental health and its importance in overall well-being.
- Identifying common mental health disorders and their symptoms.
- Discussing strategies for promoting mental health and seeking help when needed.

Unit 10: Healthy and Unhealthy Relationships

- Exploring the characteristics of healthy and unhealthy relationships.
- Discussing effective communication, boundaries, and conflict resolution in relationships.
- Developing skills for building and maintaining healthy relationships.

Unit 11: Mental Health Professionals and Services

- Understanding the roles of mental health professionals and the services they provide.
- Exploring different treatment options for mental health disorders.
- Discussing stigma surrounding mental illness and strategies for seeking help.

Unit 12: Teen Relationships

- Analyzing dynamics and challenges in teen romantic relationships.
- Discussing consent, respect, and healthy communication in relationships.
- Exploring resources and support for navigating teen relationships.

Unit 13: Peer Pressure and Conflict Resolution

- Understanding the influence of peer pressure on decision-making and behavior.
- Exploring strategies for resisting negative peer pressure and making healthy choices.

- Developing conflict resolution skills for resolving conflicts peacefully.

Unit 14: Understanding Violence

- Examining different forms of violence and their impact on individuals and communities.
- Discussing root causes of violence and strategies for prevention.
- Exploring resources and support for victims of violence.

Unit 15: Understanding Natural Disasters and Emergency Preparedness

- Discussing common natural disasters and their potential health impacts.
- Exploring emergency preparedness measures for staying safe during disasters.
- Analyzing community response and recovery efforts following natural disasters.

Unit 16: Understanding Environmental Health

- Investigating the relationship between human health and the environment.
- Exploring environmental hazards and their impact on health outcomes.
- Discussing individual and collective actions for promoting environmental health and sustainability.

Unit 17: Community Health Dynamics and Health Literacy

- Understanding the dynamics of community health and the role of individuals in promoting community well-being.
- Exploring health literacy and its importance in making informed health decisions.
- Discussing strategies for advocating for health-related issues within communities.

Unit 18: Health 10 Exam

- Reviewing key concepts and topics covered throughout the course.
- Assessing students' understanding of health-related knowledge and skills.

- Providing feedback and opportunities for reflection on personal health behaviors and choices.

Physical Education 9

Course Description: PE 9 is an asynchronous course designed to introduce students to the fundamentals of physical fitness and well-being. Through a series of modules, students will explore various aspects of fitness, including cardiovascular fitness, muscular strength, flexibility, and nutrition. The course aims to provide students with the knowledge and skills necessary to develop and maintain a healthy and active lifestyle.

Units:

Unit 1: Introduction to Fitness

- Defining fitness and its importance in overall health and well-being.
- Exploring different components of fitness and their role in physical performance.

Unit 2: What is Physical Fitness

- Understanding the concept of physical fitness and its relevance to daily life.
- Exploring factors that contribute to overall fitness, including genetics, lifestyle, and environment.

Unit 3: Skill-Related Components of Fitness

- Identifying skill-related components of fitness, such as agility, balance, coordination, power, reaction time, and speed.
- Discussing the importance of skill-related fitness in various physical activities and sports.

Unit 4: Flexibility

- Understanding the importance of flexibility in maintaining joint health and range of motion.
- Exploring techniques for improving flexibility through stretching and mobility exercises.

Unit 5: Cardiovascular Fitness

- Explaining the concept of cardiovascular fitness and its impact on heart health and endurance.
- Discussing aerobic exercises and their benefits for cardiovascular fitness.

Unit 6: Muscular Strength

- Defining muscular strength and its importance in daily activities and sports performance.
- Exploring resistance training exercises for building muscular strength.

Unit 7: Muscular Endurance

- Understanding the concept of muscular endurance and its role in prolonged physical activity.
- Discussing exercises and training methods to improve muscular endurance.

Unit 8: Body Composition

- Exploring the concept of body composition and its relationship to health and fitness.
- Discussing methods for assessing and managing body composition.

Unit 9: Fitness & Exercise

- Understanding the relationship between fitness and exercise.
- Exploring different types of exercise and their effects on overall fitness.

Unit 10: FITT Principle

- Introducing the FITT principle (Frequency, Intensity, Time, and Type) as a framework for designing effective exercise programs.
- Applying the FITT principle to individual fitness goals and preferences.

Unit 11: Aerobic and Anaerobic Exercise

- Differentiating between aerobic and anaerobic exercise and their respective benefits.
- Exploring examples of aerobic and anaerobic exercises and their impact on fitness.

Unit 12: Hydration & Sleep

- Discussing the importance of hydration and sleep in supporting overall health and fitness.
- Exploring strategies for staying hydrated and improving sleep quality.

Unit 13: Healthy Nutrition

- Understanding the role of nutrition in supporting physical activity and fitness goals.
- Exploring principles of healthy eating and balanced nutrition.

Unit 14: My Plate

- Introducing the My Plate guidelines for healthy eating.
- Discussing how to apply My Plate principles to daily food choices.

Unit 15: Hygiene

- Exploring the importance of personal hygiene in maintaining health and preventing illness.
- Discussing hygiene practices related to physical activity and exercise.

Unit 16: Stress

- Understanding the impact of stress on physical and mental health.
- Exploring strategies for managing stress and promoting overall well-being.

Unit 17: Goal Setting

- Discussing the importance of goal setting in achieving fitness and health objectives.
- Exploring SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goal-setting strategies.

Unit 18: Fitness Plan

- Applying knowledge gained throughout the course to develop a personalized fitness plan.

- Setting short-term and long-term fitness goals based on individual interests and abilities.

Physical Education 10

Course Description: PE 10 is an asynchronous course designed to deepen students' understanding of physical education concepts and promote lifelong fitness and well-being. Through a series of modules, students will explore topics such as the benefits of physical activity, fitness principles, nutrition, stress management, and consumer decision-making related to health and fitness products. The course aims to empower students to make informed choices about their health and fitness, develop effective exercise routines, and cultivate emotional and physical well-being.

Units:

Unit 1: Intro to Physical Education

- Introduction to the field of physical education and its importance in promoting health and fitness.
- Exploring the history and evolution of physical education.

Unit 2: Benefits of Physical Activity

- Understanding the physical, mental, and social benefits of regular physical activity.
- Exploring how physical activity contributes to overall well-being and quality of life.

Unit 3: Fitness Principles

- Exploring fundamental principles of fitness, including overload, progression, specificity, and reversibility.
- Discussing how to apply fitness principles to exercise programming.

Unit 4: Powering Your Body with Exercise

- Understanding how different types of exercise fuel the body and improve fitness.
- Exploring the benefits of aerobic, anaerobic, and strength training exercises.

Unit 5: Nutrients Your Body Needs

- Discussing essential nutrients and their role in supporting physical activity and overall health.
- Exploring dietary sources of key nutrients and their impact on performance.

Unit 6: Keep Your Body in Motion

- Exploring strategies for incorporating physical activity into daily life.
- Discussing the importance of staying active and reducing sedentary behavior.

Unit 7: Healthier Me

- Discussing strategies for improving overall health and well-being.
- Exploring factors that contribute to a healthy lifestyle, including diet, exercise, sleep, and stress management.

Unit 8: Safety

- Exploring safety guidelines and precautions for various physical activities and sports.
- Discussing injury prevention strategies and first aid procedures.

Unit 9: Stress

- Understanding the impact of stress on physical and mental health.
- Exploring strategies for managing stress and promoting resilience.

Unit 10: Emotional Well-being through Mind-Body Exercises

- Introducing mind-body exercises such as yoga, tai chi, and meditation.
- Exploring the benefits of mind-body practices for emotional well-being and stress management.

Unit 11: Mastering Movement: From Science to Skill

- Exploring principles of movement biomechanics and motor learning.
- Discussing techniques for mastering movement skills and improving physical performance.

Unit 12: Anatomy of Motion

- Understanding the anatomy and physiology of the musculoskeletal system.
- Exploring how anatomical structures and functions contribute to movement and physical performance.

Unit 13: Tuning Into Your Body: RPE in Action

- Introducing the concept of Rate of Perceived Exertion (RPE) and its application in exercise.
- Discussing how to use RPE to monitor and adjust exercise intensity.

Unit 14: Healthy Eating and Active Living

- Exploring the relationship between nutrition, physical activity, and overall health.
- Discussing strategies for maintaining a balanced diet and active lifestyle.

Unit 15: Fitness for Life

- Discussing the importance of lifelong fitness and physical activity.
- Exploring strategies for staying motivated and committed to fitness goals.

Unit 16: Navigating Consumer Decisions

- Discussing how to critically evaluate health and fitness products and services.
- Exploring consumer rights and responsibilities in the fitness industry.

Unit 17: Fitness Plan

- Applying knowledge gained throughout the course to develop a personalized fitness plan.
- Setting goals and designing an exercise program tailored to individual needs and preferences.

Unit 18: Exam and Evaluation

- Reviewing key concepts and topics covered throughout the course.
- Assessing students' understanding of physical education principles and concepts.

- Providing feedback on fitness plans and evaluating students' progress toward fitness goals.

American Sign Language

American Sign Language I

Course Description: American Sign Language I is an asynchronous course designed to introduce students to the fundamentals of American Sign Language (ASL). Through a series of structured units, students will learn vocabulary, grammar, and cultural aspects of ASL. The course aims to develop students' expressive and receptive skills in ASL, enabling them to engage in basic conversations and understand signed communication.

Units:

Unit 1: Introduction to ASL

- Introduction to the basics of ASL, including handshapes, movement, and facial expressions.
- Learning greetings, introductions, and basic conversational phrases.

Unit 2: Tense Indicators and Lexicalized Finger Spelling

- Understanding tense indicators and their role in ASL grammar.
- Learning lexicalized finger spelling for commonly used words and expressions.

Unit 3: Places and Locations

- Learning signs for places and locations, such as home, school, and workplace.
- Practicing spatial referencing and directional signs in ASL.

Unit 4: Simple Sentences

- Forming simple sentences in ASL, including subject-verb-object word order.
- Practicing sentence structure and sentence formation exercises.

Unit 5: Setting Up People, Places, and Things

- Describing people, places, and things using classifiers and descriptive signs.
- Understanding how to set up scenes and provide visual descriptions in ASL.

Unit 6: Review of Units 1-5

- Reviewing vocabulary, grammar, and concepts covered in Units 1-5.
- Practicing conversational skills and comprehension through interactive activities.

Unit 7: Non-Manual Signals

- Learning non-manual signals, including facial expressions, head movements, and body posture.
- Understanding the role of non-manual signals in ASL grammar and communication.

Unit 8: Mouth Morphemes

- Exploring mouth morphemes and their significance in conveying meaning in ASL.
- Practicing mouth morphemes in context through expressive activities.

Unit 9: Use of Adjectives

- Learning signs for common adjectives and their placement in ASL sentences.
- Describing people, objects, and characteristics using adjectives in ASL.

Unit 10: Classifiers Part I

- Introducing classifiers and their use in representing objects, actions, and locations in ASL.
- Practicing classifier usage in describing scenes and actions.

Unit 11: Plural Classifiers Part II

- Expanding on the use of classifiers to represent plural objects and actions.
- Practicing plural classifier usage in narrative and descriptive contexts.

Unit 12: Review of Units 7-11

- Reviewing non-manual signals, mouth morphemes, adjectives, and classifiers covered in Units 7-11.
- Reinforcing concepts through interactive review activities.

Unit 13: Synonyms

- Learning synonyms for common signs and expressions in ASL.
- Expanding vocabulary and linguistic flexibility through synonym practice.

Unit 14: Declarative Sentences

- Forming declarative sentences in ASL to convey statements and facts.
- Practicing sentence structure and facial expressions for declarative sentences.

Unit 15: Conditional Sentences

- Understanding how to express conditions and hypothetical situations in ASL.
- Practicing conditional sentence structure and facial expressions.

Unit 16: Conjunctions

- Learning conjunctions and transitional phrases to connect ideas in ASL.
- Practicing conjunction usage in narrative and conversational contexts.

Unit 17: Review of Units 13-16

- Reviewing synonyms, sentence types, and conjunctions covered in Units 13-16.
- Applying concepts through interactive review exercises.

Unit 18: First Semester Final

- Assessing students' comprehension of vocabulary, grammar, and concepts covered in the first semester.
- Evaluating expressive and receptive skills through written and signed assessments.

Unit 19: Verbs

- Learning signs for common verbs and their conjugations in ASL.
- Practicing verb usage in various sentence structures and contexts.

Unit 20: Noun Verb Pairs

- Exploring noun-verb pairs and their use in ASL sentences.
- Practicing noun-verb agreement and sentence formation exercises.

Unit 21: Sign Plurality

- Understanding how to indicate plurality in ASL signs and sentences.
- Practicing pluralization rules and usage in conversational contexts.

Unit 22: Expansions

- Learning expansion techniques to elaborate on ideas and concepts in ASL.
- Practicing expansion strategies in storytelling and descriptive signing.

Unit 23: Distributional Aspects

- Understanding distributional aspects of ASL signs, including movement and spatial orientation.
- Practicing sign distribution and placement for clarity and comprehension.

Unit 24: Review of Units 19-23

- Reviewing verbs, noun-verb pairs, sign plurality, expansions, and distributional aspects covered in Units 19-23.
- Reinforcing concepts through interactive review activities.

Unit 25: Describing Homes

- Learning signs for rooms, furniture, and features of the home environment.
- Practicing descriptive signing to describe homes and living spaces.

Unit 26: Temporal Aspects

- Understanding temporal aspects of ASL, including time signs and temporal markers.
- Practicing temporal expressions and sequencing events in ASL narratives.

Unit 27: Giving Directions

- Learning signs and expressions for giving and following directions in ASL.

- Practicing spatial referencing and directional signing in navigational contexts.

Unit 28: Rhetorical Questions

- Understanding how to express rhetorical questions in ASL.
- Practicing facial expressions and intonation for rhetorical questioning.

Unit 29: Commands

- Learning signs and expressions for giving commands and instructions in ASL.
- Practicing imperative sentence structure and command forms.

Unit 30: Review of Units 24-29

- Reviewing descriptive signing, temporal aspects, giving directions, rhetorical questions, and commands covered in Units 24-29.
- Applying concepts through interactive review exercises.

Unit 31: Time Concepts

- Exploring advanced time concepts and expressions in ASL.
- Practicing time-related signs and discussions in various contexts.

Unit 32: Storytelling

- Developing storytelling skills in ASL, including narrative structure and sequencing.
- Practicing expressive storytelling techniques and performance.

Unit 33: Money

- Learning signs and expressions related to money, currency, and financial transactions in ASL.
- Practicing money-related discussions and scenarios.

Unit 34: Receptive Skills

- Developing receptive skills in ASL through video-based activities and exercises.
- Practicing comprehension of signed conversations and narratives.

Unit 35: Review of Units 31-34

- Reviewing time concepts, storytelling, money, and receptive skills covered in Units 31-34.
- Reinforcing comprehension through interactive review activities.

Unit 36: Second Semester Final Exam

- Assessing students' comprehension of vocabulary, grammar, and concepts covered in the second semester.
- Evaluating expressive and receptive skills through written and signed assessments.

American Sign Language II

Course Description: American Sign Language II is an asynchronous course designed to further develop students' proficiency in American Sign Language (ASL). Building upon the foundation established in ASL I, students will delve deeper into advanced ASL grammar, vocabulary, and cultural aspects. Through a series of structured units, students will expand their expressive and receptive skills, enabling them to engage in more complex conversations and discussions within the Deaf community.

Units:

Unit 1: Review of Introduction to ASL

- Reviewing foundational concepts and vocabulary learned in Introduction to ASL.
- Refreshing understanding of basic ASL grammar and sentence structure.

Unit 2: Inflection

- Exploring inflection and its role in ASL to convey nuances of meaning.
- Practicing inflectional changes in signs and expressions.

Unit 3: Role Shifting

- Understanding role shifting and its significance in ASL discourse.
- Practicing role shifting techniques in narrative and conversational contexts.

Unit 4: Listing and Ranking

- Learning strategies for listing and ranking items or ideas in ASL.
- Practicing listing and ranking techniques in various scenarios.

Unit 5: Past Tense Indicators

- Introducing past tense indicators and their usage in ASL.
- Practicing past tense signing and storytelling.

Unit 6: Review of Units 1-5

- Reviewing vocabulary, grammar, and concepts covered in Units 1-5.
- Reinforcing comprehension through interactive review activities.

Unit 7: Numbers

- Learning signs for numbers and numerical concepts in ASL.
- Practicing counting, expressing quantities, and discussing numerical information.

Unit 8: Future Tense Indicators

- Introducing future tense indicators and their usage in ASL.
- Practicing future tense signing and discussing future events.

Unit 9: Pronouns

- Learning pronouns and their usage in ASL.
- Practicing pronoun agreement and placement in sentences.

Unit 10: WH-Questions

- Understanding how to form and answer WH-questions in ASL.
- Practicing WH-question structures and conversations.

Unit 11: Sports and Recreation

- Learning signs for sports, recreational activities, and leisure pursuits.
- Discussing sports and recreation preferences in ASL.

Unit 12: Review of Units 7-11

- Reviewing numbers, future tense, pronouns, WH-questions, and sports and recreation vocabulary.
- Applying concepts through interactive review exercises.

Unit 13: States and Countries

- Learning signs for states, countries, and geographical locations.
- Discussing places and travel destinations in ASL.

Unit 14: Agent Marker

- Understanding the use of agent markers to indicate who is performing an action in ASL.
- Practicing agent marker usage in narratives and descriptions.

Unit 15: Days of the Week

- Learning signs for days of the week and discussing weekly routines.
- Practicing calendar-related discussions and planning activities.

Unit 16: Labels

- Understanding how to label and categorize items or concepts in ASL.
- Practicing labeling techniques in various contexts.

Unit 17: Review of Units 13-16

- Reviewing states and countries, agent markers, days of the week, and labeling concepts.
- Reinforcing comprehension through interactive review activities.

Unit 18: Volunteer Opportunities Within the Deaf Community

- Exploring volunteer opportunities and involvement within the Deaf community.
- Discussing cultural sensitivity and appropriate interaction within the Deaf community.

Unit 19: Greetings and Responses

- Learning formal and informal greetings and responses in ASL.
- Practicing conversational greetings and exchanges.

Unit 20: Do-What?

- Understanding the "Do-What?" construction in ASL to ask about activities or tasks.
- Practicing "Do-What?" questions and responses.

Unit 21: Body Types

- Learning signs for describing different body types and physical attributes.
- Practicing descriptive signing related to appearance.

Unit 22: Narratives

- Developing narrative skills in ASL, including story structure and sequencing.
- Practicing expressive storytelling techniques.

Unit 23: Accidents

- Learning signs and expressions related to accidents and emergencies.
- Discussing safety and emergency preparedness in ASL.

Unit 24: Review of Units 19-23

- Reviewing greetings, "Do-What?" construction, body types, narratives, and accidents vocabulary.
- Applying concepts through interactive review exercises.

Unit 25: Rhetorical Questions

- Exploring rhetorical questions and their usage in ASL discourse.
- Practicing rhetorical questioning techniques.

Unit 26: Music Interpretation

- Learning signs for music-related concepts and expressions.
- Exploring music interpretation and expression in ASL.

Unit 27: Food

- Learning signs for food items, meals, and culinary activities.
- Discussing food preferences, dietary restrictions, and culinary traditions.

Unit 28: Morning Routines

- Describing morning routines and daily rituals in ASL.
- Practicing signing morning activities and sequences.

Unit 29: Evening Routines

- Describing evening routines and bedtime rituals in ASL.
- Practicing signing evening activities and sequences.

Unit 30: Review of Units 25-29

- Reviewing rhetorical questions, music interpretation, food, morning routines, and evening routines vocabulary.
- Reinforcing comprehension through interactive review activities.

Unit 31: Weather

- Learning signs for weather phenomena and discussing weather conditions.
- Practicing weather-related discussions and forecasts in ASL.

Unit 32: Materials

- Learning signs for materials, substances, and physical properties.
- Discussing materials and their uses in various contexts.

Unit 33: Social Activities

- Exploring signs for social activities, events, and gatherings.
- Discussing social calendars and invitations in ASL.

Unit 34: Outdoor Activities

- Learning signs for outdoor recreational activities and adventures.
- Discussing outdoor hobbies and interests in ASL.

Unit 35: Review of Units 31-34

- Reviewing weather, materials, social activities, and outdoor activities vocabulary.
- Reinforcing comprehension through interactive review activities.

Unit 36: Final Exam

- Assessing students' comprehension of vocabulary, grammar, and concepts covered in the course.
- Evaluating expressive and receptive skills through written and signed assessments.

Economics and Personal Finance

Economics and Personal Finance

Course Description: Economics and Personal Finance is an asynchronous course designed to provide students with a comprehensive understanding of economic principles and practical financial skills. Through a series of structured units, students will explore fundamental economic concepts such as supply and demand, market competition, government intervention, and global economics. Additionally, the course will cover essential personal finance topics, including budgeting, saving, investing, credit management, and consumer rights. By the end of the course, students will develop the knowledge and skills necessary to make informed financial decisions and achieve financial literacy and independence.

Units:

Unit 1: Thinking Like an Economist

- Introduction to economic thinking and principles.
- Understanding the economic way of thinking and decision-making.

Unit 2: Wants and Needs

- Differentiating between wants and needs in economic decision-making.
- Exploring how wants and needs influence individual and market behavior.

Unit 3: Cost Versus Benefit

- Understanding the concept of cost-benefit analysis in economics.
- Analyzing decisions based on opportunity cost and marginal analysis.

Unit 4: Economic Systems

- Introduction to different economic systems, including capitalism, socialism, and mixed economies.
- Exploring the characteristics and principles of each economic system.

Unit 5: Characteristics and Applications of Economic Systems

- Analyzing real-world examples of economic systems and their applications.
- Discussing the advantages and disadvantages of different economic systems.

Unit 6: Role of Consumers and Producers

- Understanding the roles of consumers and producers in the market.
- Exploring consumer behavior and producer decision-making.

Unit 7: Demand: The Consumer Rules

- Understanding the law of demand and factors influencing consumer demand.
- Analyzing demand curves and elasticity.

Unit 8: Supply: The Producer Rules

- Understanding the law of supply and factors influencing producer supply.
- Analyzing supply curves and elasticity.

Unit 9: When Supply Meets Demand

- Exploring market equilibrium and the interaction of supply and demand.
- Analyzing the impact of changes in supply and demand on market outcomes.

Unit 10: Competition and the Marketplace

- Understanding different types of market structures, including perfect competition, monopolistic competition, oligopoly, and monopoly.
- Analyzing the impact of market structure on prices, output, and efficiency.

Unit 11: When Government Steps In

- Exploring the role of government in the economy, including regulation, taxation, and public goods.
- Analyzing government policies and interventions in different market scenarios.

Unit 12: All about the Money

- Introduction to money, banking, and the financial system.
- Understanding the functions of money and the role of banks in the economy.

Unit 13: What To Do With All That Money

- Exploring personal finance concepts, including budgeting, saving, and investing.
- Developing financial goals and strategies for managing personal finances.

Unit 14: The Stock Market

- Introduction to the stock market, stocks, and bonds.
- Understanding how the stock market works and basic investment principles.

Unit 15: Avoiding the Next Big Crash

- Exploring strategies for managing investment risk and avoiding financial crises.
- Understanding the causes and consequences of market crashes.

Unit 16: Managing the Economy

- Exploring macroeconomic concepts, including GDP, inflation, and unemployment.
- Analyzing government policies and tools for managing the economy.

Unit 17: Taxing and Spending

- Understanding the principles of taxation and government spending.
- Exploring different types of taxes and their economic impact.

Unit 18: Economic Goals and the Business Cycle

- Exploring economic goals, including economic growth, stability, and equity.
- Understanding the phases of the business cycle and their implications for the economy.

Unit 19: Why We Trade

- Understanding the benefits of international trade and globalization.
- Exploring trade barriers, tariffs, and trade agreements.

Unit 20: Global Economy

- Exploring the interconnectedness of the global economy.

- Analyzing the impact of global events and trends on national economies.

Unit 21: Exploring Earning Potential

- Understanding factors influencing earning potential, including education, skills, and labor market trends.
- Exploring career pathways and income opportunities.

Unit 22: Financing Your Future

- Introduction to financial planning and strategies for achieving long-term financial goals.
- Exploring different types of financial products and investment options.

Unit 23: Preparing for Work

- Exploring workplace readiness skills, including communication, teamwork, and professionalism.
- Understanding the job application process and preparing for interviews.

Unit 24: Taxes

- Understanding the basics of income tax, payroll tax, and other taxes.
- Exploring tax deductions, credits, and filing requirements.

Unit 25: Mastering Comparison Shopping & Organizational Skills

- Learning strategies for comparison shopping and making informed purchasing decisions.
- Developing organizational skills for managing personal finances and expenses.

Unit 26: The True Cost of Car Ownership

- Exploring the costs associated with owning and maintaining a car.
- Understanding car financing options and strategies for buying a car.

Unit 27: Money Matters: A Journey from Goals to Growth

- Developing a personal financial plan based on individual goals and priorities.

- Understanding the importance of financial goal setting and tracking progress.

Unit 28: Reconciling Bank Statements

- Learning how to reconcile bank statements and monitor banking transactions.
- Understanding the importance of balancing accounts and detecting errors.

Unit 29: Secured and Unsecured Loans

- Understanding the differences between secured and unsecured loans.
- Exploring different types of loans, including mortgages, auto loans, and personal loans.

Unit 30: Inheritance, Estate Planning, and Net Worth Analysis

- Exploring inheritance, estate planning, and wealth transfer strategies.
- Understanding the importance of net worth analysis in financial planning.

Unit 31: Finding Money to Save

- Exploring strategies for finding extra money to save and invest.
- Understanding the importance of saving for emergencies and long-term goals.

Unit 32: Types of Savings Accounts

- Exploring different types of savings accounts and deposit products.
- Understanding interest rates, fees, and features of savings accounts.

Unit 33: Using Credit Wisely

- Understanding the basics of credit, credit scores, and credit reports.
- Exploring responsible credit card usage and building good credit habits.

Unit 34: Managing Debt

- Exploring strategies for managing and reducing debt.
- Understanding debt repayment options and debt consolidation techniques.

Unit 35: Consumer Rights

- Understanding consumer rights and protections under consumer law.
- Exploring recourse options for consumer disputes and fraud.

Unit 36: Financial Freedom: The Strategy of Saving First

- Exploring the concept of financial freedom and the importance of saving first.
- Understanding how saving and investing early can lead to long-term financial security.

This course will provide students with the knowledge and skills necessary to make informed economic and financial decisions, both in their personal lives and as responsible members of society. Through interactive lessons, real-world examples, and practical exercises, students will develop critical thinking skills and financial literacy essential for success in today's economy.

Fine Arts

Art I

Course Description: Art I is an asynchronous course designed to introduce students to the fundamental concepts, techniques, and principles of visual arts. Through a series of structured units, students will explore various art forms, including drawing, painting, sculpture, digital art, and multimedia. The course aims to develop students' creative thinking, observational skills, and artistic expression while fostering an appreciation for art history, cultural influences, and ethical considerations in the visual arts. Additionally, students will explore potential career pathways in art and new media, culminating in the development of a digital art portfolio website.

Units:

Unit 1: Introduction to Visual Arts

- Exploring the diverse world of visual arts and its significance in human expression.
- Introducing key concepts and terminology in art appreciation.

Unit 2: The Elements of Art

- Exploring the basic elements of art, including line, shape, form, color, texture, and space.
- Understanding how artists use these elements to create visual compositions.

Unit 3: Principles of Design

- Introduction to the principles of design, including balance, contrast, emphasis, movement, pattern, rhythm, and unity.
- Analyzing how these principles are applied in various artworks.

Unit 4: Drawing Basics

- Introduction to drawing materials, techniques, and processes.
- Practicing fundamental drawing skills, including contour drawing, gesture drawing, and shading.

Unit 5: Understanding the Illusion of Space in Art

- Exploring techniques for creating the illusion of depth and space in two-dimensional artworks.
- Analyzing perspective, foreshortening, and atmospheric effects in art.

Unit 6: Drawing Basics - People

- Exploring techniques for drawing the human figure, including proportions, anatomy, and gesture.
- Practicing observational drawing from life and reference images.

Unit 7: Observational Skills

- Developing observational skills through still life drawing and outdoor sketching exercises.
- Understanding how to capture form, light, and shadow in observational drawings.

Unit 8: The Creative Process

- Exploring the stages of the creative process, including ideation, experimentation, and refinement.
- Engaging in creative exercises and brainstorming sessions.

Unit 9: Research in Art

- Introduction to art research methods, including library research, online resources, and artist interviews.
- Exploring the role of research in artistic inspiration and development.

Unit 10: Unleashing Creativity

- Encouraging creative experimentation and risk-taking in art-making.
- Exploring alternative approaches and unconventional materials in art.

Unit 11: Two-Dimensional Art

- Exploring two-dimensional art forms, including drawing, painting, printmaking, and collage.
- Understanding the principles of composition and visual storytelling.

Unit 12: 3-Dimensional Art

- Exploring three-dimensional art forms, including sculpture, ceramics, and installation art.
- Understanding spatial relationships and material manipulation in sculpture.

Unit 13: What is Media Art?

- Introduction to media art and its intersection with technology, science, and culture.
- Exploring examples of media art, including video art, sound art, and interactive installations.

Unit 14: Digital Technology in Visual Arts

- Exploring digital art tools, software, and techniques.
- Understanding digital painting, drawing, photo manipulation, and graphic design.

Unit 15: Interdisciplinary Relationships in Art

- Exploring the interdisciplinary nature of art and its connections to other fields, including science, technology, engineering, and mathematics (STEM).
- Understanding how art intersects with society, politics, and the environment.

Unit 16: Personal Expression in Art

- Encouraging personal expression and artistic voice in art-making.
- Exploring themes, symbols, and narratives in personal artworks.

Unit 17: Personal Portfolios

- Understanding the importance of portfolio development in art education and career advancement.
- Building and curating a personal art portfolio showcasing students' best work.

Unit 18: Creative Foundations

- Reviewing foundational concepts and techniques in art.

- Reflecting on personal growth and development as artists.

Unit 19: Art Criticism and Aesthetics

- Developing skills in art criticism and analysis.
- Understanding aesthetic theories and their application in art interpretation.

Unit 20: Communication of Ideas and Visual Organization

- Exploring techniques for communicating ideas and concepts visually.
- Understanding visual hierarchy, composition, and graphic design principles.

Unit 21: Formulating Art Definitions

- Reflecting on personal definitions and understandings of art.
- Exploring diverse perspectives on art and its meanings.

Unit 22: Art History

- Introduction to art history, including major periods, movements, and artists.
- Exploring key artworks and their cultural, social, and historical contexts.

Unit 23: Cultural Influences on Art

- Exploring the influence of culture, ethnicity, and identity on artistic expression.
- Understanding how art reflects and shapes cultural values and traditions.

Unit 24: Engaging Your Local Community Through Art

- Exploring ways to engage with the local community through art initiatives and projects.
- Understanding the role of art in community development and social change.

Unit 25: Ethics in Visual Arts

- Examining ethical considerations in art, including plagiarism, appropriation, and cultural sensitivity.
- Understanding professional standards and ethical responsibilities in the visual arts.

Unit 26: Careers in Art

- Exploring potential career pathways in the visual arts, including fine arts, design, education, and arts administration.
- Understanding career options and opportunities for artists.

Unit 27: Careers in New Media

- Exploring emerging career opportunities in new media art and digital arts.
- Understanding the role of technology and innovation in art and design industries.

Unit 28: Careers in New Media - Digital Art

- Exploring careers in digital art, including digital illustration, animation, and multimedia production.
- Understanding industry trends and professional practices in digital art.

Unit 29: Careers in New Media - Bio Art

- Exploring careers at the intersection of art, science, and technology, including bio art and biodesign.
- Understanding the ethical and social implications of bio art practices.

Unit 30: Careers in New Media - Animation

- Exploring careers in animation, including 2D animation, 3D animation, and motion graphics.
- Understanding animation techniques, software, and industry standards.

Unit 31: Careers in New Media - Graphic Design

- Exploring careers in graphic design, including branding, advertising, and user experience design.
- Understanding design principles, typography, and visual communication strategies.

Unit 32: The Role of Exhibition

- Understanding the role of exhibitions in showcasing and promoting artworks.

- Exploring curatorial practices and exhibition design principles.

Unit 33: Visual Voices

- Encouraging students to develop unique artistic voices and perspectives.
- Exploring themes of identity, culture, and social justice in art.

Unit 34: Digital Art Portfolio Website Project

- Developing a digital art portfolio website showcasing students' artwork and achievements.
- Understanding web design principles and digital portfolio best practices.

Unit 35: Visual Arts Reflections

- Reflecting on personal growth and learning experiences in the course.
- Evaluating and critiquing personal artworks and artistic processes.

Unit 36: Visual Arts 1: Assessment

- Culminating assessment of students' learning outcomes and achievements in the course.
- Evaluation of digital art portfolio websites and reflective essays.

This course will provide students with a comprehensive foundation in visual arts, including technical skills, creative processes, critical thinking, and career exploration. Through hands-on projects, research activities, and discussions, students will develop a deeper understanding and appreciation of art while honing their artistic abilities and preparing for further study or careers in the visual arts.

Computer Science

Computer Science Foundations

Course Description: Computer Science Foundations is an asynchronous course designed to provide students with a broad understanding of computer science concepts, digital literacy, and ethical considerations in technology. Through a series of structured units, students will explore topics such as digital responsibility, online safety, information processing, operating systems, networking, and introductory coding principles. Additionally, students will engage in hands-on activities and projects to apply their knowledge and skills. The course aims to equip students with essential digital skills and foundational knowledge in computer science, preparing them for further study or careers in technology-related fields.

Units:

Unit 1: Digital Responsibility

- Exploring the principles of digital responsibility, including online etiquette, privacy, and security.
- Understanding the impact of digital actions on oneself and others.

Unit 2: Digital Literacy

- Developing digital literacy skills, including navigating digital interfaces, using productivity software, and evaluating online resources.
- Understanding how to critically assess information found online.

Unit 3: Digital Communications

- Exploring various forms of digital communication, including email, instant messaging, and social media.
- Understanding effective communication strategies and online etiquette.

Unit 4: Cyberbullying

- Understanding the nature and impact of cyberbullying.
- Exploring strategies for preventing and responding to cyberbullying incidents.

Unit 5: Online Safety

- Learning best practices for online safety, including creating strong passwords, recognizing phishing attempts, and securing personal information.
- Understanding how to protect oneself from online threats and scams.

Unit 6: NOVA Cybersecurity Lab (Special Topic)

- Exploring cybersecurity concepts and techniques through interactive simulations and activities.
- Understanding the importance of cybersecurity in protecting digital assets and privacy.

Unit 7: Technology and Computers

- Introduction to basic computer hardware and software components.
- Understanding the role of technology in modern society.

Unit 8: Information Processing

- Exploring how computers process and manipulate data.
- Understanding algorithms, binary code, and the basics of computational thinking.

Unit 9: Data Storage

- Introduction to different types of data storage devices and technologies.
- Understanding data organization, retrieval, and backup strategies.

Unit 10: Operating Systems

- Exploring the functions and features of operating systems.
- Understanding how operating systems manage hardware resources and support software applications.

Unit 11: Network Computing

- Introduction to computer networks and networked communication.
- Exploring network protocols, architectures, and security considerations.

Unit 12: Public and Home Internet Access

- Understanding different methods of internet access, including wired and wireless connections.
- Exploring internet service providers, routers, and home network setup.

Unit 13: Web Browsers

- Introduction to web browsers and their functionalities.
- Exploring browser settings, extensions, and security features.

Unit 14: Email

- Understanding the basics of email communication.
- Exploring email clients, etiquette, and security best practices.

Unit 15: Safe Computing

- Learning strategies for safe computing practices, including software updates, antivirus protection, and data encryption.
- Understanding common cybersecurity threats and vulnerabilities.

Unit 16: Connecting a Home Computer

- Exploring the process of setting up and configuring a home computer system.
- Understanding hardware installation, device drivers, and peripherals.

Unit 17: Computer Troubleshooting

- Developing basic troubleshooting skills for common computer problems.
- Understanding diagnostic tools and techniques for identifying hardware and software issues.

Unit 18: Basic Data Cleaning in Python (Special Topic)

- Introduction to data cleaning techniques using the Python programming language.
- Understanding data manipulation, transformation, and validation.

Unit 19: What is Coding?

- Introduction to coding and programming concepts.

- Understanding the importance of coding in modern technology and society.

Unit 20: Careers and the Secret Life of Coding

- Exploring career opportunities in computer science and technology-related fields.
- Understanding the role of coding in various industries and professions.

Unit 21: The Programming Process

- Introduction to the programming process, including problem-solving, algorithm design, and code implementation.
- Understanding different programming paradigms and languages.

Unit 22: Here We Go Loopty Loop

- Exploring loop structures and control flow in programming.
- Understanding how loops are used to automate repetitive tasks.

Unit 23: In Any Event

- Introduction to conditional statements and decision-making in programming.
- Understanding how conditional logic is used to control program behavior.

Unit 24: Calling All Operators

- Exploring arithmetic, comparison, and logical operators in programming.
- Understanding how operators are used to perform calculations and manipulate data.

Unit 25: Simple Algorithms to a Collection of Data (Special Topic)

- Introduction to algorithms and data structures.
- Exploring basic algorithms for searching, sorting, and manipulating data.

Unit 26: The Internet and World Wide Web

- Understanding the history and architecture of the internet and the World Wide Web.
- Exploring internet protocols, domains, and web services.

Unit 27: Understanding URLs

- Exploring Uniform Resource Locators (URLs) and web addressing.
- Understanding the structure and components of URLs.

Unit 28: Practice: Customizing a Browser

- Hands-on practice customizing web browser settings and preferences.
- Exploring browser extensions, themes, and add-ons.

Unit 29: Tools and Techniques to Find Information

- Exploring search engines, databases, and online resources for finding information.
- Understanding search strategies and advanced search techniques.

Unit 30: Making the Most of Your Search

- Developing effective search skills and strategies for information retrieval.
- Understanding how to refine search queries and evaluate search results.

Unit 31: Advanced Search Techniques

- Exploring advanced search techniques and operators for targeted information retrieval.
- Understanding how to use Boolean operators, filters, and modifiers in search queries.

Unit 32: Practice: Bookmarking

- Hands-on practice organizing and managing web bookmarks.
- Understanding the benefits of bookmarking and saving favorite web resources.

Unit 33: Examining Web Information

- Developing critical thinking skills for evaluating web information.
- Understanding how to assess the credibility, accuracy, and bias of online sources.

Unit 34: Using Information Ethically

- Understanding the principles of information ethics and intellectual property rights.
- Exploring ethical considerations in information use and sharing.

Unit 35: Understanding Copyright

- Introduction to copyright law and fair use principles.
- Understanding how to respect copyright and licensing agreements in digital content creation.

Unit 36: Web Research: Assessment

- Culminating assessment of students' web research skills and knowledge.
- Evaluation of search strategies, information sources, and ethical considerations in web research.

Virtual
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If you have any questions regarding our course catalog, please don't hesitate to reach out to us via email at ***vla@jcesc.org***.

We're here to help!