



# HAMILTON SOUTHEASTERN HIGH SCHOOL

## Essential Learning Outcomes

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Essential Learning Outcomes (ELOs) are skill-based outcomes and non-negotiable areas of proficiency to be attained by all students. ELOs are developed as a part of our work as a Professional Learning Community, specifically answering PLC question #1: “What do we want students to learn?” At Hamilton Southeastern High School, ELOs for core courses, as listed in this document, were articulated through the following process:

- Content area teacher collaboration teams developed ELOs for core courses and submitted work to department leaders.
- Department leaders reviewed ELOs, looking for (1) vertical alignment and (2) connections to state academic standards, college and career readiness skills, and IDOE employability skills. Department leaders provided feedback to teacher collaboration teams.
- After revisions, teacher collaboration teams and department leaders submitted ELOs to administration for review and compilation.

Essential learning outcomes (ELOs) are the foundation are the heart of our guaranteed curriculum. Departments will continue developing ELOs for all courses and will engage in ongoing review.

***English Department Essential Learning Outcomes***

***Math Department Essential Learning Outcomes***

***Social Studies Department Essential Learning Outcomes***

***Science Department Essential Learning Outcomes***

***World Language Department Essential Learning Outcomes***

***Exceptional Learners Department Essential Learning Outcomes***

***Health & Physical Education Department Essential Learning Outcomes***

***Business & Computer Science Department Essential Learning Outcomes***

***Applied Sciences Department Essential Learning Outcomes***

***Performing Arts Department Essential Learning Outcomes***

***Visual Arts Department Essential Learning Outcomes***

## English Department Essential Learning Outcomes

### English 9

By the end of this course, students will be able to:

- Speak familiarly of literary elements and techniques and their appearance in long and short works of fiction and nonfiction, poetry, and multi-media texts
- Demonstrate comprehension by accurately summarizing a text, including its main idea and supporting details
- Utilize textual evidence in making interpretive claims and identify evidence that supports others' claims
- Analyze the purpose of a text and particular elements of the text and the impact on the reader
- Construct written compositions, through a process of writing, for a particular purpose and with a sense of audience
- Implement knowledge of standard grammar and usage
- Engage in speaking and exercise listening skills through active discussion and oral presentations

### English 10

By the end of this course, students will be able to:

- Conduct a close reading through text annotations, collaborative discussions, individual interpretations
- Analyze authors' choices and their impact on meaning
- Make focused claims and support arguments with textual evidence
- Develop explanations of how evidence supports claims about the text
- Communicate analysis through written and oral arguments
- Conduct particular analysis of the develop of multiple themes throughout a work of literature, the development of characters, and the cultural context of a work of literature

### English 11

By the end of this course, students will be able to:

- Understand and recognize the historical context for works of American literature
- Identify elements of an author's voice and analyze the impact of authorial choices
- Explain the historical and cultural significance of selected works American literature
- Examine differing perspectives and their presence in literature
- Construct written and oral arguments that present an interpretation of a literary text and support it with evidence from the text

### English 12

By the end of this course, students will be able to:

- Read critically for key ideas, tone, textual evidence, and rhetorical appeals and devices
- Evaluate an author's position and how an author supports it with rhetorical devices
- Research and evaluate sources

- Synthesize readings and data, bringing ideas together in an analytical claim
- Support an analytical claim by citing and explaining various pieces of evidence
- Examine the relationships between ideas in a real-world context (compare/contrast, cause/effect, etc.)

#### AP Language & Composition

By the end of this course, students will be able to:

- Identify and describe the components of the rhetorical situation: the exigence, audience, writer, purpose, context, and message
- Identify and analyze the strategic elements of argument in a text (line of reasoning, evidence, commentary, counterargument, etc.)
- Identify and analyze the strategic elements of writing in a text (word choice, syntax, organization, transitions, etc.)
- Apply rhetorical understanding and strategy in the composition of written and oral arguments

#### AP Literature & Composition

By the end of this course, students will be able to:

- Identify and explain the function of features and elements in a text (point of view, images, word choice, conflict, character, etc.)
- Develop a thesis statement that conveys a defensible interpretation or analysis of a literary text.
- Select and use relevant and sufficient evidence to both develop and support a line of reasoning
- Develop commentary that establishes and explains relationships among textual evidence, the line of reasoning, and the thesis

#### AP Seminar

By the end of this course, students will be able to:

- Use curiosity, inquiry, and research skills to question and explore topics across multiple themes and content areas
- Understand and analyze arguments including authors' choices, lines of reasoning, and rhetorical appeals
- Evaluate multiple perspectives and their relationships in forming complementary, competing, or alternate arguments
- Synthesize ideas from diverse sources and perspectives
- Collaborate as a team, drawing on the range of skills and abilities of members to address complex, open-ended problems

#### AP Research

By the end of this course, students will be able to:

- Establish an argument and demonstrate the significance of one's research by explaining the rationale behind the choices made in the research process and logically connecting the findings to one's conclusions or new understandings
- Select and use evidence, evaluating the significance of the findings and strategically choosing such evidence to effectively support claims

- Design research by narrowing a focus of inquiry and identifying an ethical and feasible approach or method to accomplish the purpose of the research question
- Understand and analyze context, contextualizing the purpose and significance of one's topic of inquiry within a broader field or discipline
- Engage an audience by choosing and employing effective written and oral communication techniques

## Math Department Essential Learning Outcomes

### Algebra I

By the end of this course, students will be able to:

- Identify, explain, and manipulate the properties of real numbers
- Solve and evaluate equations using various operations and variables
- Graph equations and systems of equations
- Identify, evaluate, and graph functions
- Collect and analyze data, including the relationship between data and interpretation of data

### Geometry

By the end of this course, students will be able to:

- Apply deductive and inductive reasoning (i.e. logic) to accurately construct multi-step geometric proofs
- Explain and apply definitions and principles related to angles, lines, and planes (including congruency, parallelism, perpendicularity, and slope)
- Explain and apply definitions and principles related to triangles, quadrilaterals and other polygons, and circles (including congruency, inequality, symmetry, and ratios)
- Explain and apply definitions and principles related to three-dimensional solids (including congruency, symmetry, volume, and surface area)
- Use mathematical modeling and graphing to solve real-world problems

### Algebra II

By the end of this course, students will be able to:

- Graph mathematical functions and identify and describe features (ex. intercepts, domain, range, and lines of symmetry)
- Rewrite expressions including radicals and exponents in different forms
- Represent and solve real-world systems of equations and inequalities
- Understand, represent, and rewrite quadratic functions and find solutions to quadratic equations
- Understand, represent, and rewrite exponential and logarithmic functions and find solutions to exponential and logarithmic equations
- Collect, analyze, and compare data to understand variables, probability, and relationships (ex. correlation)

### PreCalculus

By the end of this course, students will be able to:

- Understand, define, and manipulate the relationship between variables (x and y) in various functions
- Apply principles and theorems to manipulate polynomial functions (including high and low values, zeroes, and asymptotes)
- Connect exponential properties with logarithms to produce logarithmic and exponential expressions, equations, and functions
- Understand and apply basic principles of sequences and series (including factorial notation, summation notation, finite and infinite series, and ratio).

### Trigonometry

By the end of this course, students will be able to:

- Determine the value of the of the six trigonometric functions for any angle given in degree or radian measure.
- Apply the law of sines and cosines to real-world problems
- Graph trigonometric functions, and understand how the amplitude, period, phase shift, and vertical shift is expressed graphically
- Find exact trigonometric values using identities, and solve trigonometric equations using trigonometric identities
- Use polar graphing and compare its use to the Cartesian system
- Apply knowledge of vectors to mathematical operations and solving real-world problems
- Understand and apply knowledge of the characteristics of conic sections in solving real-world problems

## Social Studies Department Essential Learning Outcomes

### World History and Civilization

By the end of this course, students will be able to:

- Identify the key components that make up a civilization.
- Describe the development and characteristics of ancient, classical, and major civilizations, including those of Africa, Asia, the Mediterranean, and the Americas.
- Analyze the influence of religion and belief systems on civilization.
- Discuss the impact of different systems on civilization (ex. Imperialism, feudalism, colonialism, mercantilism).
- Explain the causes and effects of major world conflicts.
- Demonstrate historical thinking and information literacy (examining different viewpoints, research skills, source evaluation, source interpretation, etc.)

### Geography and History of the World

By the end of this course, students will be able to:

- Define “cultural hearths” and identify their characteristics.
- Describe the five themes of geography (place, region, movement, location, human-environment interaction) and explain their importance.
- Discuss the human geographic factors of the development and impact of major world religions.
- Define and discuss concepts of human population, distribution, and migration.

- Discuss the human geographic factors affecting exploration, innovation, revolution, conflict, and commerce between and among groups of people across the world.

### United States History

By the end of this course, students will be able to:

- Identify events in history that define American and national identity.
- Discuss the political, economic, social, and cultural development of the United States across different historical eras (ex. Founding Era, Reconstruction, the Depression, Postwar, etc.)
- Articulate the wide-ranging ideas, beliefs, and social norms of different historical eras and movements (ex. federalism, industrialization, Red Scare, Civil Rights, and War on Terror)
- Discuss the impact of the United States, as an economic and military power, on the rest of the world in promoting democratic principles and the free-market system
- Demonstrate historical thinking and information literacy (examining different viewpoints, research skills, source evaluation, source interpretation, etc.)

### United States Government

By the end of this course, students will be able to:

- Explain the importance of government, politics, and civic engagement in a democratic republic
- Analyze the structures, institutions, and principles of American government (ex. Electoral College, “checks and balances,” separation of powers, etc.)
- Define and describe citizenship in the United States, including requirements, how to obtain citizenship, responsibilities as a citizen, and individual rights
- Analyze and evaluate influences on individual and societal beliefs with regard to politics, public opinion, and public policy
- Discuss current and historical events, including landmark cases, and their application to United States governance

### Economics

By the end of this course, students will be able to:

- Apply economic theory and concepts to real-world situations.
- Understand and explain the nature of, changes in, and elasticity of supply and demand.
- Identify the benefits and limitations of the price system and how prices are managed and determined.
- Describe the different type of market systems and explain how markets are competitive and how they are regulated.
- Understand how economic performance is measured (including GDP, unemployment, and inflation).
- Understand the roles of government and financial institutions in an economic system (ex. taxation, Federal Reserve System, national debt).
- Demonstrate skills and knowledge of personal finance, including tax filing, credit and its uses, loans, and budgeting.

## Science Department Essential Learning Outcomes

### Biology

By the end of this course, students will be able to:

- Identify and analyze cellular structures, functions, and processes.
- Describe and represent matter cycles and energy transfer.
- Define the characteristics of ecosystems and analyze influences on ecosystems.
- Describe and represent the elements and processes of genetic inheritance and variation.
- Describe evolutionary mechanisms, including adaptation and natural selection, and their impact on species.
- Evaluate evidence and construct explanations based on evidence in support of scientific claims.
- Use models, graphs, and representations to illustrate processes, analyze data, and support claims.

### Chemistry

By the end of this course, students will be able to:

- Recognize and describe the properties and states of matter.
- Define and describe atomic structures, perform atomic calculations, and analyze nuclear reactions and changes in matter.
- Recognize and analyze characteristics of chemical compounds and their molecular structures and bonds.
- Use chemical equations to calculate and analyze mass, chemical reactions, and compounds and mixtures.
- Define and apply concepts of thermochemistry and the behavior of thermal energy.
- Define and describe the composition and properties of solutions.
- Evaluate evidence and construct explanations based on evidence in support of scientific claims.
- Use models, graphs, and representations to illustrate processes, analyze data, and support claims.

### Integrated Chemistry and Physics

By the end of this course, students will be able to:

- Describe and distinguish different substances (elements, mixtures, and compounds) and analyze and represent their composition (particles, bonds, molecular structure, mass, density, volume, etc.)
- Describe and analyze different states of matter (liquid, solid, gas) and their physical properties.
- Define and develop graphical and pictorial representations of motion, including acceleration, velocity, and friction.
- Identify and analyze forms of energy, including measurement, distribution, conservation, and transfer.
- Describe electrical current and the relationship to voltage.
- Describe and create mathematical models of different types of waves; and understand their interactions, their appearance in nature, and their uses in modern technology.

### Earth and Space Science

By the end of this course, students will be able to:

- Describe and explain the factors and related theories surrounding the formation of the universe, including stars and planetary systems.
- Describe the characteristics of the various kinds of objects in the solar system and their organization and hierarchical relationships.
- Explain and analyze different earth cycles and systems in the atmosphere and hydrosphere and the physical and human influences that act upon them.
- Describe the geologic properties of earth and geologic processes.
- Explain tectonic theories and motion and the local and global impact of tectonics.
- Explain changes in scientific theory over time.
- Develop and construct models, flowcharts, and diagrams to illustrate scientific processes.

## World Language Department Essential Learning Outcomes

### Language Level 1

By the end of this course, students will be able to (in the target language):

- Communicate in different modes – reading, writing, listening, and speaking – and for different purposes – interpretive, interpersonal, and presentation.
- Greet people, introduce themselves, and use expressions of courtesy.
- Express personal likes and dislikes and share interests and activities.
- Answer simple questions on familiar topics.
- Utilize the present tense.

### Language Level 2

By the end of this course, students will be able to (in the target language):

- Communicate in different modes – reading, writing, listening, and speaking – and for different purposes – interpretive, interpersonal, and presentation.
- Use language to describe a word or concept for which the specific term may not be known.
- Make inferences about the meaning of vocabulary based on context.
- Describe themselves and their daily routines.
- Describe their childhood, using past tense grammatical constructions.
- Describe daily life (ex. home, restaurants, shopping) and communicate in context (ex. order food, asking directions).
- Tell simple stories using detail and sequencing.
- Compare and contrast personal experiences and culture to the experiences and culture of native speakers.

### Language Level 3

By the end of this course, students will be able to (in the target language):

- Communicate in different modes – reading, writing, listening, and speaking – and for different purposes – interpretive, interpersonal, and presentation.
- Use language to describe a word or concept for which the specific term may not be known.
- Make inferences about the meaning of vocabulary based on context.



- Engage in dialogue and conversation, responding and asking follow-up questions.
- Describe events in the past.
- Compare cultural traditions.
- Construct commands, give advice, and provide directions.
- Describe events in the future.
- Compare and contrast objects and concepts, in a hierarchy.
- Express negative or affirmative opinions.
- Describe hypothetical and conditional situations.

#### Language Level 4

By the end of this course, students will be able to (in the target language):

- Communicate in different modes – reading, writing, listening, and speaking – and for different purposes – interpretive, interpersonal, and presentation.
- Understand and communicate on a wide variety of familiar, unfamiliar, and general interest topics across various time frames.
- Discuss in detail cultural institutions (ex. education, art, relationships) and compare to American culture.

### Exceptional Learners Department Essential Learning Outcomes

#### Reading and Writing Strategies

By the end of this course, students will be able to:

- Apply reading strategies (including summary and inference) to an informational text.
- Compare and contrast using textual evidence to support inferences.
- Apply elements of persuasive appeal to write and revise a persuasive or argumentative text.

#### ACCESS

By the end of this course, students will be able to:

- Use mind-body techniques to cope with life stressors.
- Understand the connections between their behavioral responses and their emotions, thoughts, actions, and cultural contexts.
- Practice strategies to overcome internal and external barriers.
- Reflect on their actions and demonstrate an awareness of how this affects others.
- Find constructive solutions and work towards compromises.
- Advocate on behalf of themselves and others.

### Health & Physical Education Department Essential Learning Outcomes

#### Health

By the end of this course, students will be able to:

- Identify the six different nutrients and the function they have in the body.
- Identify and understand the function for both male and female reproduction system

- Describe overall wellness and discuss its three components (mental/emotional, social, and physical wellness) and their impact on overall health.
- Use refusal skills to avoid alcohol, nicotine products, and drugs.
- Recognize possible mental disorders and identify community resources available.
- Balance calorie intake versus calorie expenditure.
- Use the DECIDE model to make decisions and evaluate outcomes.
- Identify personal stressors and use stress management strategies to cope effectively.

### Physical Education I

By the end of this course, students will be able to:

- Explain the importance of lifelong fitness and the benefits of flexibility.
- Demonstrate proper technique, proper use of equipment, and understanding of game rules and strategy while playing team sports.
- Demonstrate proper technique, proper use of equipment, and understanding of game rules and strategy while playing individual sports.
- Work cooperatively with peers.

## Business & Computer Science Department Essential Learning Outcomes

### Preparing for College and Careers

By the end of this course, students will be able to:

- Identify personal interests, aptitudes, and values and explore their relationship to career possibilities
- Identify and use career planning resources and tools
- Identify and use college planning resources and tools
- Conduct a job search and manage job search materials (ex. resume, cover letter, application)
- Conduct themselves professionally in an interview
- Apply financial knowledge and strategy in managing income and acting as a responsible consumer

### Personal Financial Responsibility

By the end of this course, students will be able to:

- Describe basic economic principles (ex. supply/demand) and their impact on consumers
- Set short- and long-term financial goals.
- Evaluate the financial situation of a family and develop a plan and budget for managing family finances.
- Describe basic principles of credit and evaluate how financial decisions impact credit.
- Describe basic principles of investing compare different investment models.
- Describe basic principles of insurance and evaluate insurance options.

### Principles of Business Management

By the end of this course, students will be able to:

- Integrate knowledge of business management functions and strategies, managerial leadership and decision processes, management of human resource development, and business communication to increase organizational efficiency.
- Apply the concepts of marketing functions, plans, and strategies to develop appropriate methods to serve potential customers.
- Design strategic plans to provide a guide for business decisions.
- Apply concepts of controlling a business's finances to make operational decisions.
- Apply concepts of economic conditions, market competitions, financing strategies, innovation and opportunity recognition while integrating their knowledge of business management and marketing principles in order to design and develop a successful new venture.
- Use Microsoft Office applications in professional contexts.

### Introduction to Computer Science

By the end of this course, students will be able to:

- Apply a problem-solving process and the input-output-store process model in development of their own app.
- Use HTML and CSS to create a website and evaluate issues of privacy.
- Use JavaScript programming to develop animations and games.
- Assess the needs of a user and design solutions to address those needs.

## Applied Sciences Department Essential Learning Outcomes

### Agriculture

#### Animal Science

By the end of this course, students will be able to:

- Describe the historical and scientific developments of domestication and different animal industries, and summarize services animals provide.
- Identify and describe animal anatomy and skeletal structure and evaluate animals based on industry standards.
- Describe and demonstrate the proper use and function of tools related to animal health management, perform simple health checks, practice emergency response procedures, and identify common animal illnesses and disorders based on animal symptoms.
- Demonstrate safe and humane animal handling and restraining techniques and analyze animal handling practices and their impact on animal welfare.
- Research careers in the field of animal science and discuss the importance of animal agriculture in the economy.
- Assess animal welfare and identify tools and resources for supporting animal welfare.

### Engineering & Technology

#### Introduction to Engineering Design

By the end of this course, students will be able to:

- Define a problem, brainstorm solutions, and utilize a decision matrix.
- Use graphical modeling to communicate technical ideas.
- Construct a testable prototype and plan testing to ensure performance according to design criteria.
- Evaluate solution effectiveness, reflect on design, and recommend improvements.
- Create a manageable project schedule utilizing a Gantt chart.
- Work effectively in a team using communication, leadership, conflict resolution, and motivation.

### Family & Consumer Sciences

#### Nutrition & Wellness

By the end of this course, students will be able to:

- Demonstrate safe and proper kitchen skills (cutting, measuring, dishwashing, food storage and preparation, etc.).
- Identify and correctly use kitchen utensils and appliances.
- Read and follow a recipe and make proportional adjustments to change the yield.
- Work cooperatively to plan, prepare, and serve foods.
- Evaluate nutritional needs and apply nutritional concepts and strategies (nutrition labels, portion size, nutrient density, goal setting, health considerations, etc.)

## Performing Arts Department Essential Learning Outcomes

### Instrumental Music

#### Concert Band

By the end of this course, students will be able to:

- Apply proper breathing techniques, articulation, release style, and posture to produce characteristic tone on their instrument.
- Play in tune, both individually and as a cohesive ensemble, listening for intonation and adjusting pitch.
- Differentiate and demonstrate multiple dynamic levels while playing.
- Alter and maintain tempo and subdivide rhythms of increasing difficulty.
- Perform music accurately in various keys, demonstrating knowledge of key signatures, accidentals, chords, and melodic/harmonic intervals.
- Perform with confidence and stage presence.

#### Orchestra

By the end of this course, students will be able to:

- Apply proper bowing techniques, fingering, articulation, and posture to produce characteristic tone on their instrument.
- Play in tune, both individually and as a cohesive ensemble, listening for intonation and adjusting pitch.
- Differentiate and demonstrate multiple dynamic levels while playing.
- Alter and maintain tempo and subdivide rhythms of increasing difficulty.

- Perform music accurately in various keys, demonstrating knowledge of key signatures, chords, clefs, and diatonic melodic/harmonic intervals.
- Perform with confidence and stage presence.

#### Vocal Music

#### Choir

By the end of this course, students will be able to:

- Apply proper breathing techniques, articulation, spacing and posture to vocal performance.
- Sing in tune, both individually and as a cohesive ensemble, listening for intonation and adjusting pitch.
- Differentiate and demonstrate multiple dynamic levels while singing.
- Read music, identifying proper note names on the treble and bass clefs, including sight reading.
- Alter and maintain tempo.
- Learn and execute choreography.
- Perform a repertoire of various styles/genres individually and in a performance setting.
- Perform with confidence and stage presence.

### Visual Arts Department Essential Learning Outcomes

#### All Visual Arts Courses

By the end of this course, students will be able to:

- Engage in focused observation and grasp the nuances of their physical, emotional, and social spaces.
- Work through various iterations and test thinking through the creative process.
- Work confidently and experimentally with tools and techniques; critiquing and revising their work until they have refined their desired solution.
- Use their personal lenses to express themselves uniquely through style and concept.