

Liberal Studies Program

Kremen School of Education and Human Development

Student Outcomes Assessment Plan (Soap)

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I. Mission Statement

The mission of the Liberal Studies Blended Program is to provide a strong knowledge-based education in the liberal arts, along with skills and attributes that will provide subject matter preparation for elementary teaching or preparation for other professions and fields of public service.

II. Goals and Student Learning Outcomes

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1. Learning Outcome 1 (Content)

Demonstrate proficiency in the 12 content areas as they are delineated in the State of California document *Content Specifications for the Multiple Subject Teaching Credential* (Subject Matter Standards).

2. Learning Outcome 2 (Diversity)

Describe, compare, or demonstrate the impact of diversity in a multi-culturally and linguistically responsive manner.

3. Learning Outcome 3 (Pedagogy)

Identify, describe, or demonstrate appropriate content specific teaching practices to facilitate learning.

4. Learning Outcome 4 (Technology)

Evaluate and use a variety of strategies and emerging electronic technologies for effective instructional communication.

III. Curriculum Map (Matrix of Courses X Learning Outcomes)

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- Appendix A – Liberal Studies Program Matrix
- Appendix B – Curriculum Map for Content Specifications

IV. Assessment Methods

A. Direct Measures (at least three)

1. Course Assignments (w/scoring rubrics)
2. California Subjects Examination for Teachers (Subtests 101, 102 and 103)
3. Portfolio of field experience/lesson plans/unit design

B. Indirect Measures (*Alumni Survey is required*)

1. Liberal Studies Exit Survey
2. CSU System-wide Evaluation of Teacher Preparation Programs (Alumni Survey)
3. Liberal Studies Program-designed Course Evaluations

V. Student Learning Outcomes X Assessment Methods Matrix

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- Appendix C – Curriculum Map for Learning Outcomes
- Appendix D – Liberal Studies Assessment Methods Matrix

VI. Timeline for Implementation of Assessment Methods and Summary Evaluations

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Year 2013 to 2014

- | | |
|-----------|---|
| Method 1. | Direct Measure A. 1 - Goal/Learning Outcome #4 |
| Method 2. | Indirect Measure B.2 - Goal/Learning Outcome #4 |

Year 2014 to 2015

- | | |
|-----------|---|
| Method 1. | Direct Measure A.2 – Goal/Learning Outcome #1 |
|-----------|---|

Year 2014 to 2015

- | | |
|-----------|--|
| Method 1. | Direct Measure A.3 – Goal/Learning Outcome #3
Direct Measure A.2 – (Subtest 101, 102, or 103) |
|-----------|--|

Year 2015 to 2016

- | | |
|-----------|--|
| Method 1. | Indirect Measure B.1- Goal/Learning Outcome #2 |
|-----------|--|

Method 2.

Indirect Measure B.3 – Goal/Learning Outcome #2

Direct Measure A.3 – Goal/Learning Outcome #1

VII. Closing the Loop - Summary Evaluation, Curriculum Adjustment, and Reporting

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To ensure that assessment results will be used for program improvement, the Liberal Studies Review Committee designates at least one monthly Review Committee meeting in each semester for discussion of issues related to outcomes assessment and to share assessment findings. The findings are discussed by the entire membership of the committee and an action plan is decided upon, as appropriate. If it is decided that an action needs to be taken or a change needs to be made, the Review Committee Chair assigns responsibilities. The data analysis and changes made based on the results of assessment activities are then documented in meeting minutes and archived for program review. The Liberal Studies Coordinator, in collaboration with the Review Committee Chair, follows up on the implementation of the action plans and makes any necessary adjustments to ensure program fidelity. Any actions/changes are also reported to the Dean at the end of the academic year for inclusion in the Provost Annual Report.

Liberal Studies Assessment Methods Matrix

Goal 1: Content- Demonstrate proficiency in the 12 content areas as they are delineated in the State of California document *Content Specifications for the Multiple Subject Teaching Credential (Subject Matter Standards)*.

Objectives	Content Specifications* for Reading, Language & Literature and History Social Science	Content Specifications* for Math and Science	Content Specifications* for Physical Education, Visual & Performing Arts and Human Development		Assessment Techniques	Date(s) Scheduled	Date(s) Completed	Person Responsible	Assessment Findings	Changes
CSET Subtest 1	X				California Subjects Examination for Teachers	Spring 2014	Fall 2014	LS Coordinator		
CSET Subtest 2		X			California Subjects Examination for Teachers	Fall 2014	Spring 2015	LS Coordinator		
CSET Subtest 3			X		California Subjects Examination for Teachers	Spring 2015	Fall 2015	LS Coordinator		
ENGL 117W	X				Portfolio	Fall 2015	Spring 2016	Instructor		

*** Refer to Curriculum Map for Content Specifications**

Liberal Studies Assessment Methods Matrix

Goal 2: Diversity- Describe, compare, or demonstrate the impact of diversity in a multi-culturally and linguistically responsive manner.

Objectives	Address the impact of diversity in a multiculturally responsive manner.	Address the impact of diversity in a linguistically responsive manner.			Assessment Techniques	Date(s) Scheduled	Date(s) Completed	Person Responsible	Assessment Findings	Changes
SSCI 180 SOC 111	X				LS Exit Survey; Course Evaluations;	Spring 2016	Fall 2016	Instructor		
LING 132		X			LS Exit Survey; Couse Evaluations;	Spring 2016	Fall 2016	Instructor		

Liberal Studies Assessment Methods Matrix

Goal 3: Pedagogy- Identify, describe, or demonstrate appropriate content specific teaching practices to facilitate learning.

Objectives	Field Experience	Best Teaching Practices/ Curriculum Design			Assessment Techniques	Date(s) Scheduled	Date(s) Completed	Person Responsible	Assessment Findings	Changes
COMM 114	X	X			Portfolio	Fall 2014	Spring 2015	LS Coordinator		
KINES 152	X	X			Portfolio	Fall 2014	Spring 2015	LS Coordinator		
ART 179 MUSIC 153 DRAMA 136 DANCE 160		X			Portfolio	Fall 2014	Spring 2015	LS Coordinator		
PSYCH 169 RA 125 SPED 120	X				Portfolio	Fall 2014	Spring 2015	LS Coordinator		
NSCI 115		X			Portfolio	Fall 2014	Spring 2015	LS Coordinator		

Liberal Studies Assessment Methods Matrix

Goal 4: Evaluate and use a variety of strategies and emerging electronic technologies for effective instructional communication.

Objectives	9.1 Adequate access to technology resources	9.2 Use appropriate technologies for research, analysis, communication, and presentation applications	9.3 Analyze, compare and evaluate technologies as effective tools of learning within content areas.	9.4 Consider ethical/social issues related to technology; access, equity, privacy, and protection of children	Assessment Techniques	Date(s) Scheduled	Date(s) Completed	Person Responsible	Assessment Findings	Changes
IAS 108	X	X	X	X	Course Assignments w/scoring rubrics; Alumni Survey	Fall 2013	Spring 2014	LS Coordinator	Kim Morin	
CI 100	X	X	X	X	Course Assignments w/scoring rubrics; Alumni Survey	Fall 2013	Spring 2014	LS Coordinator	Otto Benavides	

Liberal Studies SOAP Time Line

Semester	Fall 2013	Spring 2014	Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016
Assessments	<p><u>IAS 108-</u> Course Assignments w/scoring rubric; Alumni Survey</p> <p><u>CI 100-</u> Course Assignments w/scoring rubric; Alumni Survey</p>	<p><u>CSET Subtest 1-</u> California Subjects Examination for Teachers</p>	<p><u>CSET Subtest 2-</u> California Subjects Examination for Teachers</p>	<p><u>CSET Subtest 3-</u> California Subjects Examination for Teachers</p>	<p><u>ENGL 117W-</u> Portfolio</p> <p><u>COMM 114-</u> <u>KINES 152-</u> <u>ART 179-</u> <u>MUSIC 153-</u> <u>DRAMA 136-</u> <u>DANCE 160-</u> <u>PSYCH 169-</u> <u>RA 125-SPED</u> <u>120-</u> Portfolio</p>	<p><u>SSCI 180 -</u> LS Exit Survey; Assessment Questionnaire</p> <p><u>SOC 111-</u> LS Exit Survey; Assessment Questionnaire</p> <p><u>LING 132 -</u> LS Exit Survey; Assessment Questionnaire</p>	

Content Specifications in Reading, Language, and Literature

	COMM 3,7,8	ENGL 1	ENGL 20 ENGL 30 HUM 10 HUM 11	ENGL 117W	LING 11	COMM 114	LING 132
Domain 1: Language and Linguistics							
1.1 Language Structure and Linguistics							
1.1.1 Identify and demonstrate an understanding of the fundamental components of human language, including phonology, morphology, syntax and semantics, as well as the role of pragmatics in using language to communicate					X		X
1.1.2 Reflect on both the potential for differences among languages and the universality of linguistic structures					X		X
1.1.3 Demonstrate knowledge of phonemic awareness (e.g., the processes of rhyming, segmenting, and blending)							X
1.1.4 Apply knowledge of similarities and differences among groups of phonemes (e.g., consonants and vowels) that vary in their placement and manner of articulation							X
1.1.5 Know the differences between phoneme awareness and phonics							X
1.1.6 Know the predictable patterns of sound-symbol and symbol-sound relationships in English (the Alphabetic Principle)					X		X
1.1.7 Identify examples of parts of speech, and their functions, as well as the morphology contributing to their classification					X		X
1.1.8 Recognize and use syntactic components (such as phrases and clauses, including verbals) to understand and develop a variety of sentence types (e.g., simple, compound, and complex sentences)							X
1.2 Language Development and Acquisition							
1.2.1 Apply knowledge of both the development of a first language and the acquisition of subsequent ones					X		X
1.2.2 Describe the principal observable milestones in each domain, and identify the major theories that attempt to explain the processes of development and acquisition					X		X

1.2.3 Demonstrate that they understand the range of issues related to the interaction of first languages and other languages					X		X
1.2.4 Recognize special features that may identify a pupil's language development as exceptional, distinguishing such features from interlanguage effects							X
1.3 Literacy							
1.3.1 Understand and use the major descriptions of developing literacy					X		X
1.3.2 Identify the progressive development of phonemic awareness, decoding, comprehension, word recognition, and spelling (including its complexities related to the interaction of phonology, the alphabetic principle, morphology, and etymology)							X
1.3.3 Understand how these processes interact with the development of concepts, of vocabulary (including relationships among etymologies and both denotative and connotative word meanings), and of contextual analysis					X		X
1.4 Assessment							
1.4.1 Apply knowledge of the implications that language development and differences have for the processes of learning to read and reading to learn							X
1.4.2 Know and apply a range of assessment methods and instruments to the respective and interrelated developing abilities in listening (for aural/oral languages), speaking, reading (decoding and comprehension), vocabulary, and spelling conventions					X		X

Content Specifications in Reading, Language, and Literature

	COMM 3,7,8	ENGL 1	ENGL 20 ENGL 30 HUM 10 HUM 11	ENGL 117W	LING 11	COMM 114	LING 132
Domain 2: Non-Written and Written Communication							
2.1 Conventions of Language							
2.1.1 Identify and use the conventions associated with what is called standard English	X	X		X	X		X

2.1.2 Recognize, understand, and use a range of conventions in both spoken and written English, including varieties of sentence structure, preferred usage and conventional forms of spelling, capitalization and punctuation in written English	X	X		X			X
2.2 Writing Strategies							
2.2.1 Describe the stages of the writing process		X					
2.2.2 Understand the purpose and techniques of various prewriting strategies (e.g., outlining, webbing, note-taking)		X					
2.2.3 Revise and edit writing, drawing upon their understanding of principles of organization, transitions, point- of-view, word-choices, and conventions		X					X
2.3 Writing Applications							
2.3.1 Demonstrate their knowledge of principles of composition, such as paragraphing, transitional phrases, appropriate vocabulary, and context		X		X			
2.3.2 Compose and/or analyze writing according to conventions in different genres, including narrative, interpretive, descriptive, persuasive and expository writing, as well as summaries, letters, and research reports		X	X	X			
2.3.4 Understand and are able to use bibliographic citations in a standard format		X		X			X
2.4 Non-Written Communication							
2.4.1 Demonstrate knowledge of non-written genres and traditions, and their characteristics (e.g., organization), including narratives, persuasive pieces, research presentations, poetry recitations, and responses to literature	X						
2.4.2 Apply understandings of language development stages, from pre-production (beginning) to intermediate fluency, to children’s developing abilities in such areas					X	X	X
2.4.3 Analyze speech in terms of presentation components (e.g., volume, pace), pronunciation fluency, and identify the integration of nonverbal components (e.g., gesture) with verbal elements (e.g., volume)							X

2.4.4 Demonstrate knowledge of dialects, idiolects, and changes in what is considered standard oral English usage and their effects on perceptions of speaker performance, with attention to the dangers of stereotyping and bias	X			X		X	
2.4.5 Demonstrate an understanding of the potential impact on non-written presentations of images, sound, and other features from electronic media						X	X
2.5 Research Strategies							
2.5.1 Demonstrate their ability to use a variety of research sources, both print and electronic	X	X					X
2.5.2 Interpret such research, putting to use their findings and interpretations to construct their own reports and narratives	X	X					X
2.5.3 Understand the importance of citing research sources, using recognizable and accepted conventions for doing so	X	X					X
Domain 3: Texts	COMM 3,7,8	ENGL 1	ENGL 20 ENGL 30 HUM 10 HUM 11	ENGL 117W	LING 11	COMM 114	LING 132
3.1 Concepts and Conventions							
3.1.1 Analyze narrative and expository texts, with special attention to children’s literature, from a range of cultures, for both literary elements and structural features				X			

Content Specifications in Reading, Language, and Literature

3.1.2 Identify themes derived from cultural patterns and symbols found in rituals, mythologies, and traditions						X	
3.1.3 Identify and analyze evidence of an author’s or narrator’s perspective in both fiction and non-fiction			X	X			
3.1.4 Identify and evaluate structural devices in prose and poetry (such as rhyme, metaphor, and alliteration), and they examine the connections among organizational structures, the writer’s view point, and the goals of reading			X	X			
3.2 Genres							

3.2.1 Analyze texts in different literary genres (novels, short stories, folk and fairy tales, and poetry of various types, for example), as they are represented in different cultures, according to their structure, organization, and purpose			X	X			
3.2.2 Demonstrate an understanding of structural features and their applications in various types of expository and narrative materials, including popular media such as magazines and newspapers						X	
3.2.3 Understand and evaluate the use of elements of persuasive argument in print, speech, videos, and in other media		X	X				
3.3 Interpretation of Texts							
literal and figurative meanings in texts, from a range of cultures and genres, using textual support for inferences, conclusions, and generalizations they draw from any work				X		X	
3.3.2 Evaluate the structure, purpose, and potential uses of visual text features, such as graphics, illustrations, and maps						X	X
3.3.3 Recognize and analyze instances of bias and stereotyping in a text					X	X	X

Content Specifications in History and Social Science

Domain 1: World History	SSCI 110	SSCI 180	HIST 11	HIST 20	PSi 2	Geog 4	ECON 165
1.1 Ancient Civilizations							
1.1.1 Trace the impact of physical geography on the development of ancient civilizations (i.e., Mesopotamian, Egyptian, Kush, Hebrew, Greek, Indian, Chinese, and Roman civilizations)	X						
1.1.2 Identify the intellectual contributions, artistic forms, and traditions (including the religious beliefs) of these civilizations	X						
1.1.3 Recognize patterns of trade and commerce that influenced these civilizations	X						
1.2 Medieval and Early Modern Times							

1.2.1 Describe the influence of physical geography on the development of medieval and early modern civilizations (i.e., Chinese, Japanese, African, Arabian, Mesoamerican, Andean Highland, and European civilizations)	X						
1.2.2 Trace the decline of the Western Roman Empire and the development of feudalism as a social and economic system in Europe and Japan							
1.2.3 Identify the art, architecture, and science of Pre-Columbian America. Candidates describe the role of Christianity in medieval and early modern Europe, its expansion beyond Europe, and the role of Islam and its impact on Arabia, Africa, Europe and Asia	X						
1.2.4 Trace the development of the Renaissance and Scientific Revolution in Europe							
1.2.5 Define the development of early modern capitalism and its global consequences							
1.2.6 Describe the evolution of the idea of representative democracy from the Magna Carta through the Enlightenment							
Domain 2: United States History	SSCI 110	SSCI 180					
Independence							
2.1.1 Identify and describe European exploration and settlement, and the struggle for control of North America during the Colonial Era, including cooperation and conflict among American Indians and new settlers	X						
2.1.2 Identify the founders and discuss their religious, economic and political reasons for colonization of North America	X						
2.1.3 Describe European colonial rule and its relationship with American Indian societies	X						
2.1.4 Describe the development and institutionalization of African slavery in the western hemisphere and its consequences in Sub-Saharan Africa							

2.1.5 Describe the causes of the War for Independence, elements of political and military leadership, the impact of the war on Americans, the role of France, and the key ideas embodied within the Declaration of Independence							
2.2 The Development of the Constitution and the Early Republic							
2.2.1 Describe the political system of the United States and the ways that citizens participate in it through executive, legislative and judicial processes							
2.2.2 Define the Articles of Confederation and the factors leading to the development of the U.S. Constitution, including the Bill of Rights							
philosophy contained within the Constitution, especially separation of powers and federalism							

Content Specifications in History and Social Science

2.2.4 Trace the evolution of political parties, describe their differing visions for the country, and analyze their impact on economic development policies							
2.2.5 Identify historical, cultural, economic and geographic factors that led to the formation of distinct regional identities	X						
2.2.6 Describe the westward movement, expansion of U.S. borders, and government policies toward American Indians and foreign nations during the Early Republic	X						
2.2.7 Identify the roles of Blacks (both slave and free), American Indians, the Irish and other immigrants, women and children in the political, cultural and economic life of the new country							
2.3 Civil War and Reconstruction							
2.3.1 Recognize the origin and the evolution of the anti-slavery movement, including the roles of free Blacks and women, and the response of those who defended slavery		X					

2.3.2 Describe evidence for the economic, social and political causes of the Civil War, including the constitutional debates over the doctrine of nullification and secession							
2.3.3 Identify the major battles of the Civil War and the comparative strengths and weaknesses of the Union and the Confederacy							
2.3.4 Describe the character of Reconstruction, factors leading to its abandonment, and the rise of Jim Crow practices							
2.4 The Rise of Industrial America							
2.4.1 Recognize the pattern of urban growth in the United States, the impact of successive waves of immigration in the nineteenth century, and the response of renewed nativism	X	X					
2.4.2 Understand the impact of major inventions on the Industrial Revolution and the quality of life							
Domain 3: California History	SSCI 110	SSCI 180					
3.1 The Pre-Columbian Period through the Gold Rush							
3.1.1 Identify the impact of California's physical geography on its history	X						
3.1.2 Describe the geography, economic activities, folklore and religion of California's American Indian peoples	X						
3.1.3 Discuss the impact of Spanish exploration and colonization, including the mission system and its influence on the development of the agricultural economy of early California	X						
3.1.4 Describe Mexican rule in California	X						
3.1.5 State the causes of the war between Mexico and the United States and its consequences for California	X						
3.1.6 Describe the discovery of gold and its cultural, social, political and economic effects in California, including its impact on American Indians and Mexican nationals	X						
3.2 Economic, Political, and Cultural Development Since the 1850's							

3.2.1 Identify key principles of the California Constitution, including the Progressive-era reforms of initiative, referendum and recall, and they recognize similarities and differences between it and the U. S. Constitution	X						
Dust Bowl migration, and discuss their impact on the cultural,	X						
3.2.3 Identify the effects of federal and state law on the legal status of immigrants		X					

Content Specifications in History and Social Science

3.2.4 Describe historical and contemporary perspectives on cultural diversity in the United States and in California	X	X					
3.2.5 Understand the development and identify the locations of California’s major economic activities: mining, large-scale agriculture, entertainment, recreation, aerospace, electronics and international trade							
3.2.6 Identify factors leading to the development of California’s water delivery system, and describe its relationship to California geography							

Content Specifications in Mathematics

Domain 1: Number Sense	ELM	Math10A	Math 10B			Math 100	
1.1 Numbers, Relationships Among Numbers, and Number Systems							
1.1.1 Understand base ten place value, number theory concepts (e.g., greatest common factor), and the structure of the whole, integer, rational, and real number systems		X				X	
1.1.2 Order integers, mixed numbers, rational numbers (including fractions, decimals, and percents) and real numbers		X				X	
1.1.3 Represent numbers in exponential and scientific notation		X				X	
1.1.4 Describe the relationships between the algorithms for addition, subtraction, multiplication, and division		X				X	

1.1.5 Understand properties of number systems and their relationship to the algorithms, [e.g., 1 is the multiplicative identity; $27 + 34 = 2 \times 10 + 7 + 3 \times 10 + 4 = (2 + 3) \times 10 + (7 + 4)$]		X				X	
1.1.6 Perform operations with positive, negative, and fractional exponents, as they apply to whole numbers and fractions	X	X				X	
1.2 Computational Tools, Procedures, and Strategies							
1.2.1 Demonstrate fluency in standard algorithms for computation and evaluate the correctness of nonstandard algorithms		X				X	
1.2.2 Demonstrate an understanding of the order of operations		X				X	
1.2.3 Round numbers, estimate the results of calculations, and place numbers accurately on a number line		X				X	
1.2.4 Demonstrate the ability to use technology, such as calculators or software, for complex calculations		X	X			X	
Domain 2: Algebra and Functions	ELM	Math10A	Math 10B			Math 100	
2.1 Patterns and Functional Relationships							
2.1.1 Represent patterns, including relations and functions, through tables, graphs, verbal rules, or symbolic rules		X				X	
2.1.2 Use proportional reasoning such as ratios, equivalent fractions, and similar triangles, to solve numerical, algebraic, and geometric problems		X	X				
2.2 Linear and Quadratic Equations and Inequalities							
2.2.1 Able to find equivalent expressions for equalities and inequalities, explain the meaning of symbolic expressions (e.g., relating an expression to a situation and vice versa), find the solutions, and represent them on graphs	X	X				X	
2.2.2 Recognize and create equivalent algebraic expressions (e.g., $2(a+3) = 2a + 6$), and represent geometric problems algebraically (e.g., the area of a triangle)		X	X			X	

2.2.3 Have a basic understanding of linear equations and their properties (e.g., slope, perpendicularity); the multiplication, division, and factoring of polynomials; and graphing and solving quadratic equations through factoring and completing the square	X		X			X	
2.2.4 Interpret graphs of linear and quadratic equations and inequalities, including solutions to systems of equations	X					X	
Domain 3: Measurement and Geometry	ELM	Math10A	Math 10B			Math 100	
3.1 Two- and Three-dimensional Geometric Objects							
dimensional figures, such as triangles (e.g., isosceles and right triangles), quadrilaterals, and spheres			X				

Content Specifications in Mathematics

3.1.2 Able to draw conclusions based on the congruence, similarity, or lack thereof, of two figures			X				
and reflections			X				
3.1.4 Understand the Pythagorean theorem and its converse			X			X	
3.1.5 Able to work with properties of parallel lines			X				
3.2 Representational Systems, Including Concrete Models, Drawings, and Coordinate Geometry							
3.2.1 Use concrete representations, such as manipulatives, drawings, and coordinate geometry to represent geometric objects			X			X	
3.2.2 Construct basic geometric figures using a compass and straightedge, and represent three-dimensional objects through two-dimensional drawings			X			X	
3.2.3 Combine and dissect two- and three-dimensional figures into familiar shapes, such as dissecting a parallelogram and rearranging the pieces to form a rectangle of equal area			X			X	
3.3 Techniques, Tools, and Formulas for Determining Measurements							

3.3.1 Estimate and measure time, length, angles, perimeter, area, surface area, volume, weight/mass, and temperature through appropriate units and scales			X			X	
3.3.2 Identify relationships between different measures within the metric or customary systems of measurements and estimate an equivalent measurement across the two systems			X				
3.3.3 Calculate perimeters and areas of two-dimensional objects and surface areas and volumes of three-dimensional objects			X			X	
3.3.4 Relate proportional reasoning to the construction of scale drawings or models			X				
3.3.5 Use measures such as miles per hour to analyze and solve problems		X	X				
Domain 4: Statistics, Data Analysis, and Probability	ELM	Math10A	Math 10B			Math 100	
4.1 Collection, Organization, and Representation of Data							
4.1.1 Represent a collection of data through graphs, tables, or charts			X				
4.1.2 Understand the mean, median, mode, and range of a collection of data			X				
4.1.3 Have a basic understanding of the design of surveys, such as the role of a random sample			X				
4.2 Inferences, Predictions, and Arguments Based on Data							
4.2.1 Interpret a graph, table, or chart representing a data set			X				
4.2.2 Draw conclusions about a population from a random sample, and identify potential sources and effects of bias			X				
4.3 Basic Notions of Chance and Probability							
4.3.1 Define the concept of probability in terms of a sample space of equally likely outcomes			X				
4.3.2 Use understanding of complementary, mutually exclusive, dependent, and independent events to calculate probabilities of simple events			X				

4.3.3 Can express probabilities in a variety of ways, including ratios, proportions, decimals, and percents			X				
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Content Specifications in Science

Domain 1: Physical Science	BIOL 10	NSCI 1A	EES 9			NSCI 115	
1.1 Structure and Properties of Matter							
1.1.1 Understand the physical properties of solids, liquids, and gases, such as color, mass, density, hardness, and electrical and thermal conductivity		X				X	
1.1.2 Know that matter can undergo physical changes (e.g., changes in state such as the evaporation and freezing of water) and chemical changes (i.e., atoms in reactants rearrange to form products with new physical and chemical properties)		X				X	
1.1.3 Know that matter consists of atoms and molecules in various arrangements, and can give the location and motions of the parts of an atom (protons, neutrons, and electrons)	X	X				X	
1.1.4 Describe the constituents of molecules and compounds, naming common elements (e.g., hydrogen, oxygen, and iron), and explain how elements are organized on the Periodic Table on the basis of their atomic and chemical properties		X					
1.1.5 Describe characteristics of solutions (such as acidic, basic, and neutral solutions) and they know examples with different pH levels such as soft drinks, liquid detergents, and water		X					
1.1.6 Know that mixtures may often be separated based on physical or chemical properties		X					
1.2 Principles of Motion and Energy							
1.2.1 Describe an object's motion based on position, displacement, speed, velocity, and acceleration		X					

1.2.2 Know that forces (pushes and pulls), such as gravity, magnetism, and friction act on objects and may change their motion if these forces are not in balance		X					
1.2.3 Know that "like" electrical charges or magnetic poles produce repulsive forces and "unlike" charges or poles produce attractive forces		X					
1.2.4 Describe simple machines in which small forces are exerted over long distances to accomplish difficult tasks (e.g., using levers or pulleys to move or lift heavy objects)		X					
1.2.5 Identify forms of energy including solar, chemical, electrical, magnetic, nuclear, sound, light, and electromagnetic		X					
1.2.6 Know that total energy in a system is conserved but may be changed from one form to another, as in an electrical motor or generator		X					
1.2.7 Understand the difference between heat, (thermal energy) and temperature, and understand temperature measurement systems. Candidates know how heat may be transferred by conduction, convection, and radiation (e.g., involving a stove, the Earth's mantle, or the sun)	X	X					
1.2.8 Describe sources of light including the sun, light bulbs, or excited atoms (e.g., neon in neon lights) and interactions of light with matter (e.g., vision and photosynthesis)	X	X					
1.2.9 Know and can apply the optical properties of waves, especially light and sound, including reflection (e.g., by a mirror) or refraction (e.g., bending light through a prism)		X					
1.2.10 Explain conservation of energy resources in terms of renewable and non-renewable natural resources and their use in society	X	X					
Domain 2: Life Science	BIOL 10	NSCI 1A	EES 9				NSCI 115

Content Specifications in Science

2.1 Structure of Living Organisms and Their Function (Physiology and Cell Biology)

2.1.1 Describe levels of organization and related functions in plants and animals, including, organ systems (e.g., the digestive system), organs, tissues (e.g., ovules in plants, heart chambers in humans), cells, and subcellular organelles (e.g., nucleus, chloroplast, mitochondrion)	X						
2.1.2 Know structures and related functions of systems in plants and animals, such as reproductive, respiratory, circulatory, and digestive	X					X	
2.1.3 Understand principles of chemistry underlying the functioning of biological systems (e.g., carbon's central role in living organisms, water and salt, DNA, and the energetics of photosynthesis)	X						
2.2 Living and Nonliving Components in Environments (Ecology)							
2.2.1 Know the characteristics of many living organisms (e.g., growth, reproduction, and stimulus response)	X					X	
2.2.2 Understand the basic needs of all living organisms (e.g., food, water, and space), and can distinguish between environmental adaptations and accommodations	X					X	
2.2.3 Describe the relationship between the number and types of organisms an ecosystem can support and relationships among members of a species and across species	X					X	
2.2.4 Illustrate the flow of energy and matter through an ecosystem from sunlight to food chains and food webs (including primary producers, consumers, and decomposers)	X					X	
2.2.5 Identify the resources available in an ecosystem, and describe the environmental factors that support the ecosystem, such as temperature, water, and soil composition	X					X	
2.3 Life Cycle, Reproduction, and Evolution (Genetics and Evolution)							
2.3.1 Diagram life cycles of familiar organisms (e.g., butterfly, frog, mouse)	X						

2.3.2 Explain the factors that affect the growth and development of plants, such as light, gravity, and stress	X						
2.3.3 Distinguish between sexual and asexual reproduction, and understand the process of cell division (mitosis), the types of cells and their functions, and the replication of plants and animals	X						
2.3.4 Distinguish between environmental and genetic sources of variation, and understand the principles of natural and artificial selection	X						
2.3.5 Know how evidence from the fossil record, comparative anatomy, and DNA sequences can be used to support the theory that life gradually evolved on earth over billions of years	X						
2.3.6 Understand the basis of Darwin's theory, that species evolved by a process of natural selection	X						
Domain 3: Earth and Space Science	BIOL 10	NSCI 1A	EES 9			NSCI 115	
3.1 The Solar System and the Universe (Astronomy)							
3.1.1 Identify and describe the planets, their motion, and that of other planetary bodies (e.g., comets and asteroids) around the sun			X				
3.1.2 Explain time zones in terms of longitude and the rotation of the earth, and understand the reasons for changes in the observed position of the sun and moon in the sky during the course of the day and from season to season			X				

Content Specifications in Science

3.1.3 Name and describe bodies in the universe including the sun, stars, and galaxies			X				
3.2 The Structure and Composition of the Earth (Geology)							
3.2.1 Describe the formation and observable physical characteristics of minerals (e.g., quartz, calcite, hornblende, mica, and common ore minerals) and different types of rocks (e.g., sedimentary, igneous, and metamorphic)			X				

3.2.2 Identify characteristics of landforms, such as mountains, rivers, deserts, and oceans			X				
3.2.3 Explain chemical and physical weathering, erosion, deposition, and other rock forming and soil changing processes and the formation and properties of different types of soils and rocks			X				
3.2.4 Describe layers of the earth (crust, lithosphere, mantle, and core) and plate tectonics, including its convective source			X				
3.2.5 Explain how mountains are created and why volcanoes and earthquakes occur, and describe their mechanisms and effects			X				
plate tectonics			X				
3.2.7 Identify factors influencing the location and intensity of earthquakes			X				
3.2.8 Describe the effects of plate tectonic motion over time on climate, geography, and distribution of organisms, as well as more general changes on the earth over geologic time as evidenced in landforms and the rock and fossil records, including plant and animal extinction			X			X	
3.3 The Earth's Atmosphere (Meteorology)							
3.3.1 Explain the influence and role of the sun and oceans in weather and climate and the role of the water cycle			X			X	
3.3.2 Describe causes and effects of air movements and ocean currents (based on convection of air and water) on daily and seasonal weather and on climate			X				
3.4 The Earth's Water (Oceanography)							
3.4.1 Compare the characteristics of bodies of water, such as rivers, lakes, oceans, and estuaries			X			X	
3.4.2 Describe tides and explain the mechanisms causing and modifying them, such as the gravitational attraction of the moon, sun, and coastal topography			X				

Content Specifications in Visual and Performing Arts

Domain 1: Dance	MUSIC 9	MUSIC 74	DANCE 160			MUSIC 153	IAS 108
1.1 Identify the components and strands of dance education found in the Visual and Performing Arts Framework and Student Academic Content Standards			X				X
1.2 Demonstrate a basic fluency with the elements of dance such as space, time, levels, and force/energy			X				X
1.3 Use basic techniques to create dance/movement with children			X				X
1.4 Able to identify and explain styles of dance from a variety of times, places, and cultures			X				X
1.5 Able to make judgments about dance works based on the elements of dance			X				X
Domain 2: Music	MUSIC 9	MUSIC 74	DANCE 160			MUSIC 153	IAS 108
found in the Visual and Performing Arts Framework and Student Academic Content Standards						X	X
2.2 Demonstrate a basic fluency with the elements of music such as pitch, rhythm, and timbre and music concepts, including music notation. They use basic techniques to create vocal and instrumental music with children	X	X				X	X
2.3 Identify and explain styles and types of music and instruments from a variety of times, places, and cultures						X	X
2.4 Able to make judgments about musical works based on the elements and concepts of music		X				X	X
Domain 3: Theatre	DRAMA 136	DRAMA 137	IAS 108				
3.1 Identify the components and strands of theatre education found in the Visual and Performing Arts Framework and Student Academic Content Standards	X	X	X				
3.2 Demonstrate a basic fluency in acting, directing, design, and scriptwriting (plot and action)	X	X	X				
3.3 Apply these elements and principles in order to create dramatic activities with children including improvisation and character development	X	X	X				

3.4 Identify and explain styles of theatre from a variety of times, places, and cultures	X	X	X				
3.5 Able to make judgments about dramatic works based on the elements of theatre	X	X	X				
Domain 4: Visual Art	ART 1	ARTH 10&11	ART 179			DRAMA 136	IAS 108
found in the Visual and Performing Arts Framework and Student Academic Content Standards			X			X	X
4.2 Demonstrate a basic fluency with the principles of art such as balance, repetition, contrast, emphasis, and unity and are able to explain how works of art are organized in terms of line, color, value, space, texture, shape, and form	X	X	X			X	X
4.3 Identify and explain styles of visual arts from a variety of times, places, and cultures	X	X	X			X	X
4.4 Interpret works of art to derive meaning and are able to make judgments based on the principles of art as they are used to organize line, color, value, space, texture, shape, and form in works of art	X	X	X			X	X

Content Specifications in Physical Education

Domain 1: Movement Skills and Movement Knowledge	Kines 152						
1.1 Basic Movement Skills							
1.1.1 Identify movement concepts including body awareness, space awareness, and movement exploration	X						
1.1.2 List locomotor skills such as skipping, nonlocomotor skills such as static balancing, and object manipulation such as catching	X						
1.1.3 Recognize basic concepts of biomechanics that affect movement, such as how the body moves and how such movement is influenced by gravity, friction, and the laws of motion	X						

1.1.4 Describe critical elements of basic movement skills, such as stepping in opposition when throwing and/or following through when kicking a ball	X						
1.2 Exercise Physiology: Health and Physical Fitness							
1.2.1 Identify health and fitness benefits and associated risks, supporting a physically active lifestyle, related to safety and medical factors (e.g., asthma, diabetes)	X						
1.2.2 Recognize exercise principles such as frequency, intensity, and time to select activities that promote physical fitness	X						
1.2.3 Describe physical fitness components, such as flexibility, muscular strength and endurance, cardiorespiratory endurance, and body composition, which are included in comprehensive personal fitness development programs	X						
1.3 Movement Forms: Content Areas							
1.3.1 Know a variety of traditional and nontraditional games, sports, dance, and other physical activities	X						
1.3.2 Able to cite basic rules and social etiquette for physical activities	X						
1.3.3 Can select activities for their potential to include all students regardless of gender, race, culture, religion, abilities, or disabilities	X						
1.3.4 Integrate activities with other content areas, such as math and science	X						
Domain 2: Self-Image and Personal Development							
2.1 Physical Growth and Development							
2.1.1 Identify the sequential development of fine and gross motor skills in children and young adolescents	X						
2.1.2 Describe the influence of growth spurts (changes in height and weight) and body type on movement and coordination	X						
2.1.3 Recognize the impact of factors such as exercise, relaxation, nutrition, stress, and substance abuse on physical health and general well-being	X						

2.2 Self-Image							
2.2.1 Discover the role of physical activity in the development of a positive self-image, and how psychological skills such as goal setting are selected to promote lifelong participation in physical activity	X						
Domain 3: Social Development	X						
3.1 Social Aspects of Physical Education							
3.1.1 Recognize individual differences such as gender, race, culture, ability, or disability	X						
3.1.2 Describe the developmental appropriateness of cooperation, competition, and responsible social behavior for children of different ages	X						

Content Specifications in Physical Education

3.1.3 List activities to provide opportunities for enjoyment, self-expression, and communication	X						
3.2 Cultural and Historical Aspects of Movement Forms							
3.2.1 Understand the significance of cultural and historical influences on games, sports, dance, and other physical activities	X						

Content Specifications in Human Development

Domain 1: Cognitive Development from Birth Through Adolescence	CFS 39					EHD 50	
1.1 Cognitive Development							
1.1.1 Define basic concepts of cognitive and moral development (e.g., reasoning, symbol manipulation, and problem solving)	X						
1.1.2 Identify stages in cognitive and language development and use them to describe the development of individuals, including persons with special needs	X						
1.1.3 Identify characteristics of play and their influence on cognitive development	X						

1.1.4 Recognize different perspectives on intelligence (i.e., concepts of multiple intelligences) and their implications for identifying and describing individual differences in cognitive development	X					X I	
Domain 2: Social and Physical Development from Birth through Adolescence	CFS 39						
2.1 Social Development							
2.1.1 Define concepts related to the development of personality and temperament (e.g., attachment, self-concept, autonomy, identity)	X						
2.1.2 Describe the social development of children and young adolescents, including persons with special needs	X						
2.1.3 Identify characteristics of play and their impact on social development, and they describe influences on the development of prosocial behavior	X						
2.2 Physical Development							
2.2.1 Describe the scope of physical development at different ages	X						
2.2.2 Identify individual differences in physical development, including the development of persons with special needs	X						
Domain 3: Influences on Development from Birth Through Adolescence	CFS 39						
3.1 Influences on Development							
3.1.1 Identify potential impacts on the development of children and young adolescents from genetic or organic causes, sociocultural factors (e.g., family, race, cultural perspective), socioeconomic factors (e.g., poverty, class), and sex and gender	X						
3.1.2 Identify sources of possible abuse and neglect (e.g., physical, emotional and substance abuse and neglect) and describe their impact on development	X					X I	

Liberal Studies Curriculum Map

Learning Outcomes

<i>Courses</i>	<i>Learnin g Outcom e 1</i>	<i>Learnin g Outcom e 2</i>	<i>Learnin g Outcome 3</i>	<i>Learning Outcome 4 (Technolo</i>	<i>Courses</i>	<i>Learnin g Outcom e 1</i>	<i>Learnin g Outcom e 2</i>	<i>Learnin g Outcome 3</i>	<i>Learning Outcome 4 (Technolo</i>
GE A1					GE E1				
COMM 3	I				CFS 39	I			
COMM 7	I				GE IB				
COMM 8	I				NSCI 115	I		A	
GE A2					GE IC				
ENGL 10	I				IAS 108	I			R/A
ENGL 5A	I				GE ID				
ENGL 5B	I				SSCI 110	I/R	A	I/R	
GE B1					GE M/I				
NSCI 1A	I				SSCI 180	I	I/R/A	I/R	
GE B2					SOC 111	I	I/R/A		
BIOL 10	I				OTHER Major				
GE B4					CSCI 5	I			I
MATH 10	I				CSCI 7	I			I
GE C1					IS 52/52L	I			I
ART 1	I								
ARTH 10	I				KINES 152	I/R	I/R	I/R/A	I
ARTH 11	I								
DRAMA 6	I				LING 11	I			
MUSIC 9	I								
MUSIC 74	I				MATH 10E	I			
GE C2									
HIST 20	I				PSYCH 169	I	I/R	A	
GE C1/C2					RA 125	I	I/R	A	I/R
ENGL 20	I				SPED 120	I	I/R	A	
ENGL 30	I								
HUM 10	I				ART 179	I		A	
HUM 11	I				MUSIC 153	I		A	
GE D1					DRAMA 13	I		A	
HIST 11	I				DANCE 16	I		A	
GE D2					DRAMA 13	I		A	
PLSI 2	I								
GE D3					ENGL 117N	I/R/A			
GEOG 4	I								
					CI 100	I/R		I/R	R/A
					COMM114	I/R	I/R	I/R/A	I/R
					ECON 165	I			
					LING 132	I/R	A		
					MATH 100	I/R			I/R
					EES 9	I			

LEGEND

I- Introduced
R- Reinforced

Liberal Studies Curriculum Map

Learning Outcomes

A- Assessed
